TOWN OF CHAPEL HILL

Standard Details of Construction
Compiled January 2026

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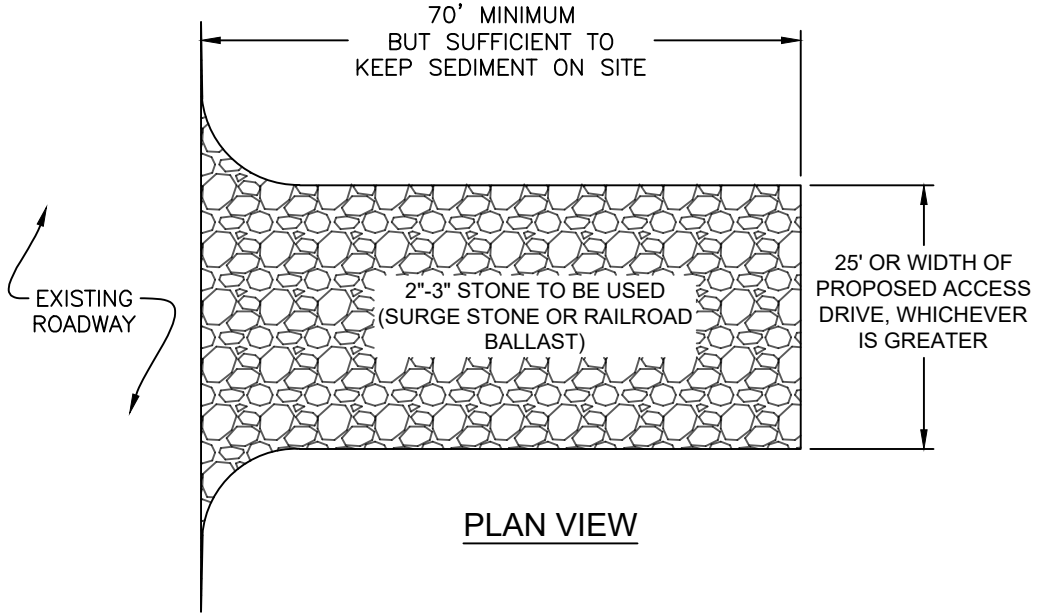
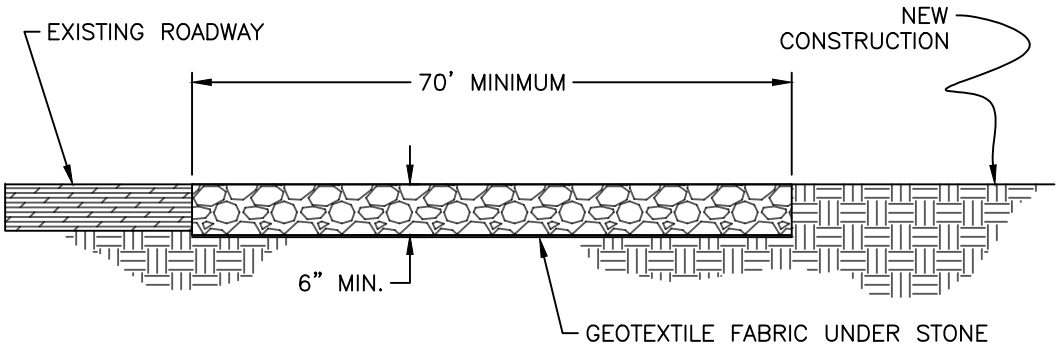


PLAN VIEW



CROSS SECTION

" NOT TO SCALE "

CONSTRUCTION NOTES:

1. CLEAR THE ENTRANCE AND EXIT AREA OF ALL VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL AND PROPERLY GRADE IT.
2. PLACE THE GRAVEL TO THE SPECIFIC GRADE AND DIMENSIONS SHOWN ON THE PLANS, AND SMOOTH IT.
3. PROVIDE DRAINAGE TO CARRY WATER TO A SEDIMENT TRAP OR OTHER SUITABLE OUTLET.
4. USE GEOTEXTILE FABRICS IN ORDER TO IMPROVE STABILITY OF THE FOUNDATION.
5. INSTALL SILT FENCE, TREE PROTECTION FENCE OR CONSTRUCTION FENCE BETWEEN EDGE OF DISTURBED AREAS AND EXISTING ROADWAY TO ENSURE CONSTRUCTION ENTRANCE IS USED.
6. IF CONSTRUCTION ON THE SITE IS OF SUCH NATURE THAT SUFFICIENT MUD IS NOT REMOVED FROM THE VEHICLE TRAVELING OVER THE STONE, THEN THE TIRES OF VEHICLES LEAVING THE SITE MUST BE WASHED BEFORE ENTERING THE PUBLIC ROAD.

MAINTENANCE NOTES:

1. INSPECT ALL MEASURES AT LEAST WEEKLY AND AFTER EACH RAINFALL OF 1.0 INCH OR GREATER. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
2. MAINTAIN THE GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. THIS MAY REQUIRE PERIODIC TOPDRESSING WITH 2-INCH STONE.
3. SEDIMENT ON ROADWAYS IS TO BE REMOVED IMMEDIATELY BY BROOM AND SHOVEL, EITHER BY MANUAL OR MECHANICAL MEANS, AND NOT TO BE WASHED OFF WHERE IT HAS THE POTENTIAL TO ENTER A STREAM, DRAINAGE WAY OR STORM DRAIN SYSTEM.

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COMMERCIAL CONSTRUCTION ENTRANCE

EC-1.01

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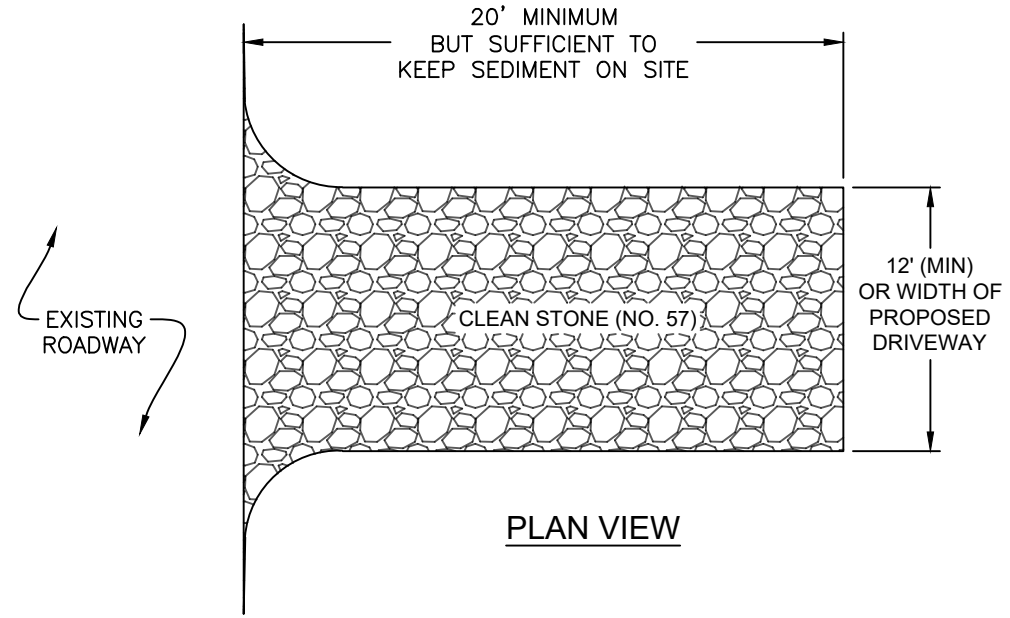
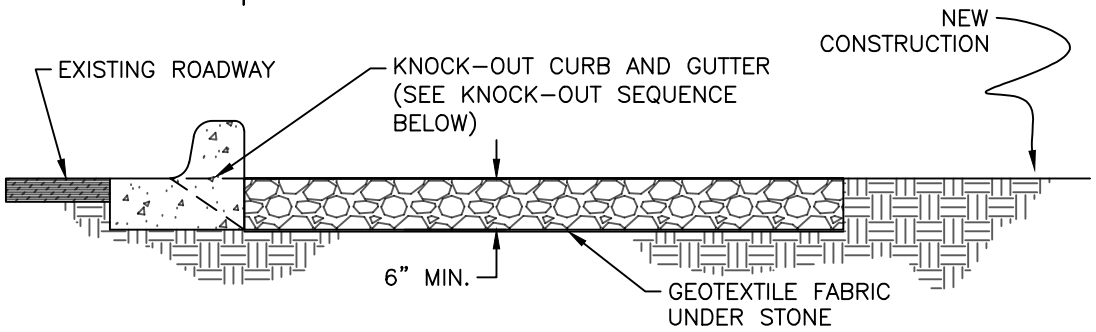
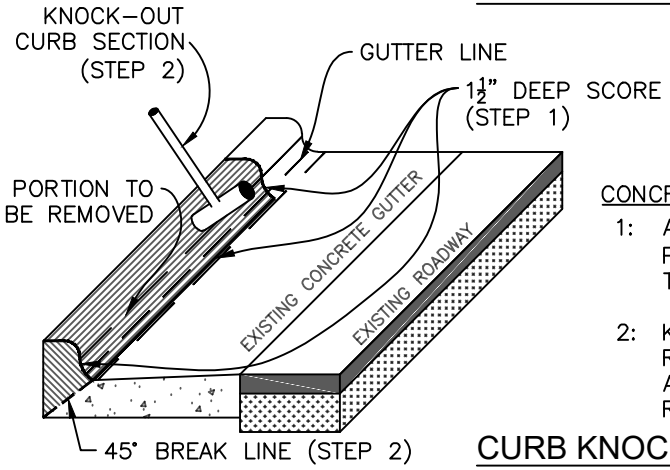


PLAN VIEW



CROSS SECTION



CURB KNOCK-OUT

" NOT TO SCALE "

CONCRETE CURB KNOCK–OUT SEQUENCE:

1: A 1½" DEEP CUT SHALL BE MADE PERPENDICULAR TO BACK OF CURB AND THEN PARALLEL WITH GUTTER LINE

2: KNOCK–OUT SECTION OF CURB TO BE REMOVED, ACHIEVING A 45° BREAK ANGLE, AND CLEAN EDGES ON CURB TO REMAIN

CONSTRUCTION NOTES:

1. CLEAR THE ENTRANCE AND EXIT AREA OF ALL VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL AND PROPERLY GRADE IT.
2. PLACE THE GRAVEL TO THE SPECIFIC GRADE AND DIMENSIONS SHOWN ON THE PLANS, AND SMOOTH IT.
3. PROVIDE DRAINAGE TO CARRY WATER TO A SEDIMENT TRAP OR OTHER SUITABLE OUTLET.
4. USE GEOTEXTILE FABRICS IN ORDER TO IMPROVE STABILITY OF THE FOUNDATION IN LOCATIONS SUBJECT TO SEEPAGE OR HIGH WATER TABLE.
5. IF CONSTRUCTION ON THE SITE IS OF SUCH NATURE THAT SUFFICIENT MUD IS NOT REMOVED FROM THE VEHICLE TRAVELING OVER THE STONE, THEN THE TIRES OF VEHICLES LEAVING THE SITE MUST BE WASHED BEFORE ENTERING THE PUBLIC ROAD.

MAINTENANCE NOTES:

1. INSPECT ALL MEASURES AT LEAST WEEKLY AND AFTER EACH RAINFALL OF 1.0 INCH OR GREATER. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
2. MAINTAIN THE GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. THIS MAY REQUIRE PERIODIC TOPDRESSING WITH CLEAN STONE.
3. SEDIMENT ON ROADWAYS IS TO BE REMOVED IMMEDIATELY BY BROOM AND SHOVEL, EITHER BY MANUAL OR MECHANICAL MEANS, AND NOT TO BE WASHED OFF WHERE IT HAS THE POTENTIAL TO ENTER A STREAM, DRAINAGE WAY OR STORM DRAIN SYSTEM.

NOTE:
THIS ENTRANCE APPLIES ONLY TO ENTRANCES OF INDIVIDUAL SINGLE FAMILY RESIDENTIAL UNITS. ALL OTHER PROJECTS SHALL UTILIZE A COMMERCIAL CONSTRUCTION ENTRANCE (CHAPEL HILL DETAIL EC–1.01)

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RESIDENTIAL CONSTRUCTION ENTRANCE

EC-1.02

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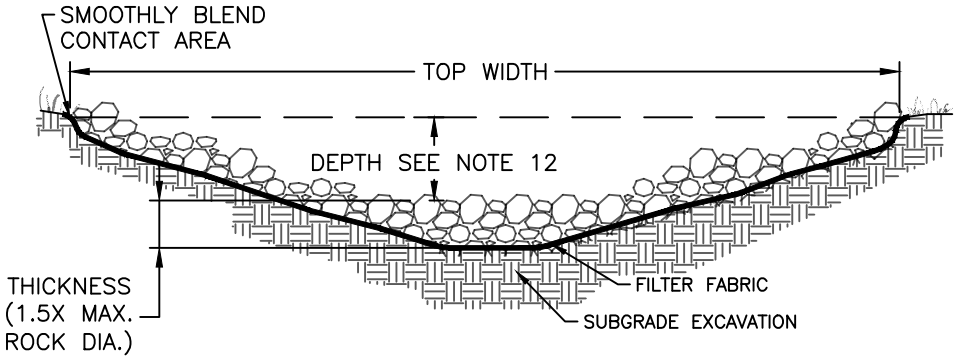
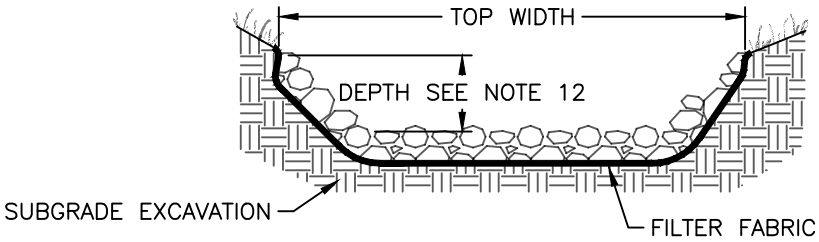
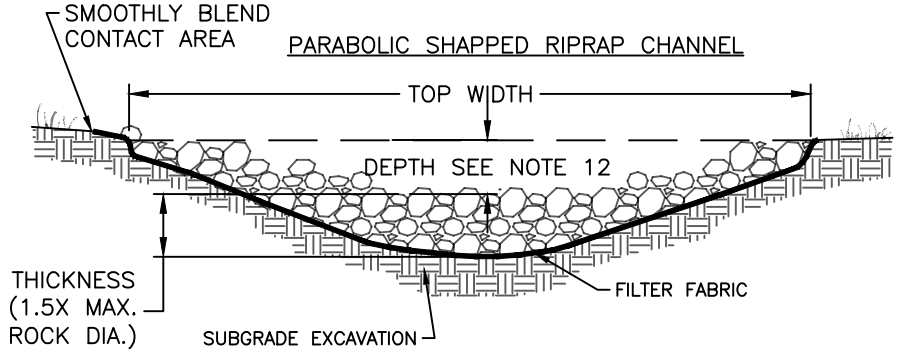
V-SHAPED RIPRAP CHANNEL



TRAPEZOIDAL RIPRAP CHANNEL



PARABOLIC SHAPPED RIPRAP CHANNEL



NOTES:

1. CLEAR THE FOUNDATION AREA OF TREES, STUMPS, ROOTS, LOOSE ROCK, AND OTHER OBJECTIONABLE MATERIAL.
2. EXCAVATE THE CROSS SECTION TO THE LINES AND GRADES OF THE FOUNDATION OF THE LINER AS SHOWN ON THE PLANS. BRING OVER-EXCAVATED AREAS TO GRADE BY INCREASING THE THICKNESS OF THE LINER OR BY BACKFILLING WITH MOIST SOIL COMPACTED TO THE DENSITY OF THE SURROUNDING MATERIAL.
4. ROCK RIPRAP LININGS SHOULD BE INSTALLED PER NCDEQ STANDARDS AND SPECIFICATIONS
5. PLACE FILTERS, BEDDINGS, AND FOUNDATION DRAINS TO LINE AND GRADE IN THE MANNER SPECIFIED. PLACE FILTER AND BEDDING MATERIALS IMMEDIATELY AFTER SLOPE PREPARATION.
6. FOR SYNTHETIC FILTER FABRICS, OVERLAP THE DOWNSTREAM EDGE BY AT LEAST 12 INCHES WITH THE UPSTREAM EDGE WHICH IS BURIED A MINIMUM 12 INCHES IN A TRENCH. SPACE ANCHOR PINS EVERY 3 FEET ALONG THE OVERLAP.
7. SPREAD GRANULAR MATERIALS IN A UNIFORM LAYER. WHEN MORE THAN ONE GRADATION IS REQUIRED, SPREAD THE LAYERS SO THERE IS MINIMAL MIXING.
8. FILTER MATERIAL SHOULD CONSIST OF A LEAST 3 INCHES OF MATERIAL ON ALL SIDES OF THE DRAIN PIPE. THE DRAIN PIPE CONDUIT SHOULD BE A MINIMUM OF 4 INCHES IN DIAMETER.
9. PERFORM ALL CHANNEL CONSTRUCTION TO KEEP EROSION AND WATER POLLUTION TO A MINIMUM. IMMEDIATELY VEGETATE ALL DISTURBED AREAS OR OTHERWISE PROTECT THEM AGAINST SOIL EROSION.
10. PROPORTION THE CHANNEL WIDTH AND DEPTH TO MEET THE NEEDS OF DRAINAGE, CARRYING CAPACITY, FOUNDATION LIMITATIONS, AND SPECIFIC SITE CONDITIONS
11. FILTER FABRIC MUST BE INSTALLED BETWEEN ROCK AND SOIL
12. CHANNEL DEPTH SHALL PROVIDE A MINIMUM 6-IN. FREEBOARD DURING 10-YR STORM EVENT. FOR SITES EXCEEDING 1 ACRE OF LAND DISTURBANCE, MINIMUM DEPTH SHALL BE 18-IN.
13. TYPICAL MINIMUM CHANNEL RUNNING SLOPE SHALL BE 2% IN DIRECTION OF FLOW

Channel Lining Thickness

Material	Minimum Thickness
Rock Riprap	1.5 times maximum stone diameter
Flagstone	4 inches including mortar

MAINTENANCE:

1. INSPECT CHANNELS AT LEAST WEEKLY AND AFTER EACH RAINFALL OF 1.0 INCH OR GREATER AND MAKE REPAIRS PROMPTLY. GIVE SPECIAL ATTENTION TO THE OUTLET AND INLET SECTIONS AND OTHER POINTS WHERE CONCENTRATED FLOW ENTERS.
2. CAREFULLY CHECK STABILITY AT ROAD CROSSINGS, LOOKING FOR INDICATION OF PIPING, SCOUR HOLES, OR BANK FAILURES. MAKE ANY REPAIRS IMMEDIATELY.
3. MAINTAIN ALL VEGETATION ADJACENT TO THE CHANNEL IN A HEALTHY, VIGOROUS CONDITION.
4. RESTORE STONE IN AREAS THAT HAVE LESS THAN THE MINIMUM THICKNESS

" NOT TO SCALE "

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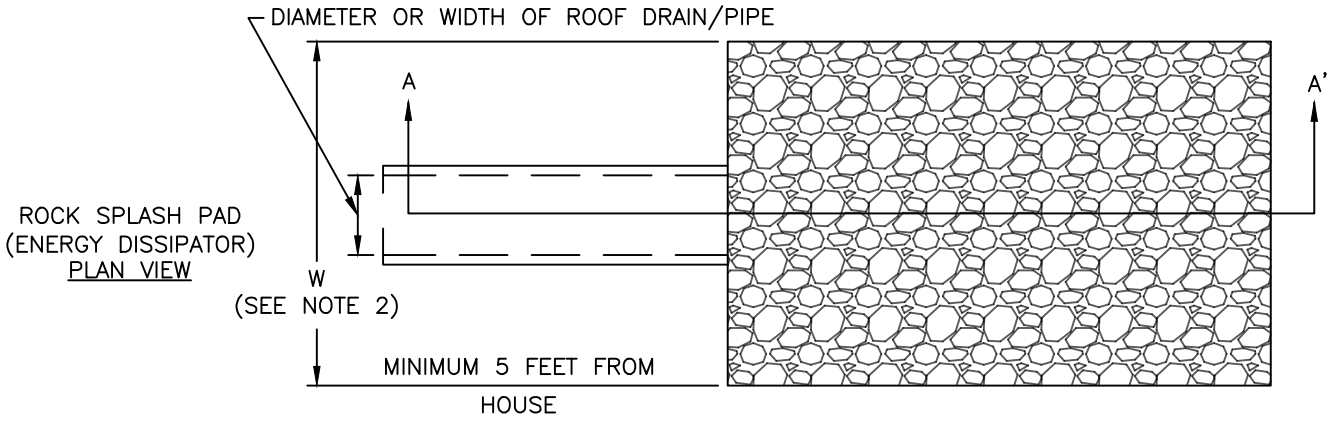
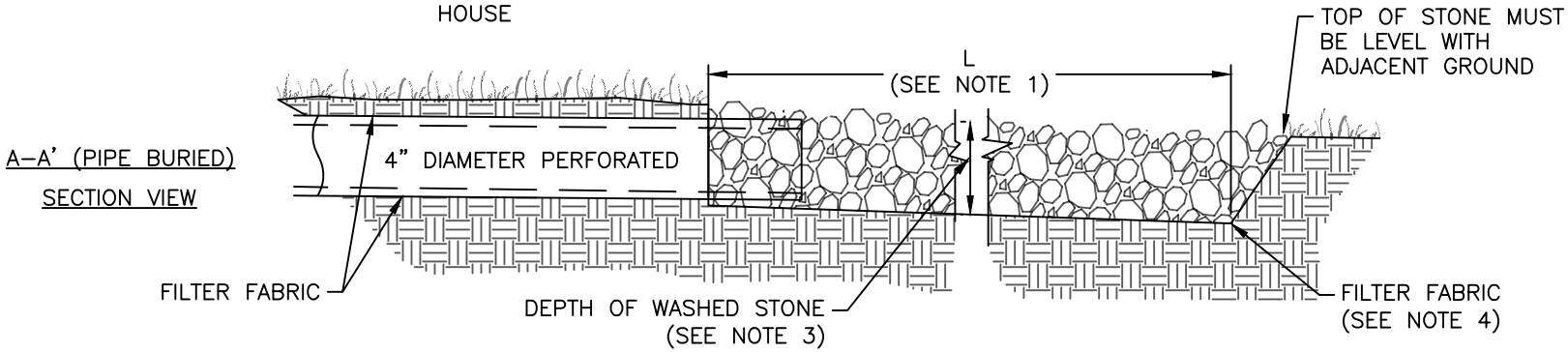
RIPRAP CHANNELS

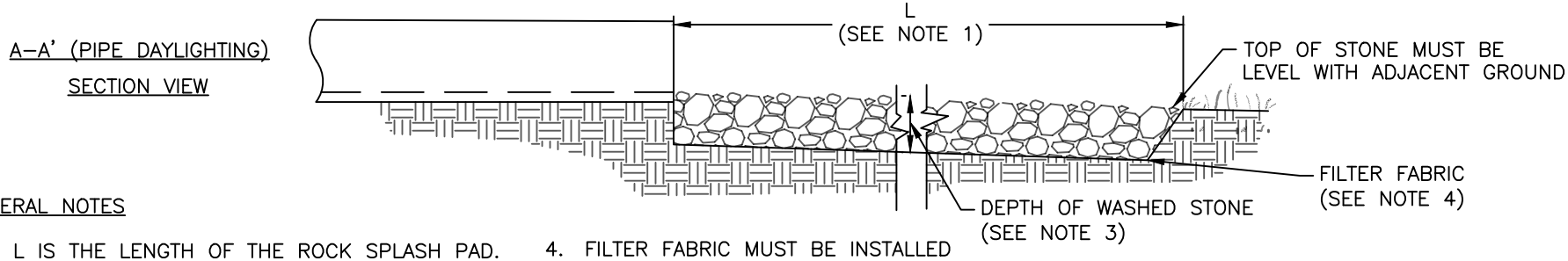
EC-2.00



MAINTENANCE:

1. INSPECT DISSIPATOR AT LEAST WEEKLY AND AFTER EACH RAINFALL OF 1.0 INCH OR GREATER, LOOKING FOR INDICATION OF ROCK WASHOUT, PIPING, SCOUR HOLES, OR BANK FAILURES. MAKE ANY REPAIRS IMMEDIATELY.
2. MAINTAIN ALL VEGETATION ADJACENT TO PAD IN A HEALTHY, VIGOROUS CONDITION.
3. RESTORE STONE IN AREAS THAT HAVE LESS THAN THE MINIMUM THICKNESS





GENERAL NOTES

1. L IS THE LENGTH OF THE ROCK SPLASH PAD. MEASURED IN DIRECTION OF FLOW. THE MINIMUM LENGTH SHALL BE 6 TIMES THE DIAMETER OR WIDTH OF THE ROOF DRAIN/PIPE, BUT NOT LESS THAN 3 FEET.
2. W IS THE WIDTH OF THE ROCK SPLASH PAD, MEASURED PERPENDICULAR TO THE DIRECTION OF FLOW. THE MINIMUM WIDTH SHALL BE 3 THIMES THE DIAMETER OR WIDTH OF THE ROOF DRAIN/PIPE, BUT NOT LESS THAN 2 FEET.
3. FOR STONE WITH A D^{50}=4 INCHES, THE STONE DEPTH SHALL BE A MINIMUM OF 9 INCHES. FOR STONE WITH A D^{50}=6 INCHES, THE STONE DEPTH SHALL BE A MINIMUM OF 12 INCHES.
4. FILTER FABRIC MUST BE INSTALLED BETWEEN ROCK AND SOIL
5. STONE SHALL BE WASHED #57 GRAVEL OR EQUIVALENT
6. NO MORE THAN 1000 SQ. FT. OF ROOF AREA MAY BE DRAINED TO A SINGLE ROCK SPLASH PAD. IF 1000 SQ. FT. OF ROOF AREA IS EXCEEDING, USE STILLING BASIN PER TOCH DETAIL EC–8.00
7. MINIMUM DEPTH OF #57 STONE SHALL BE 6 INCHES AND VARIES WITH EXISTING GRADE CONDITIONS

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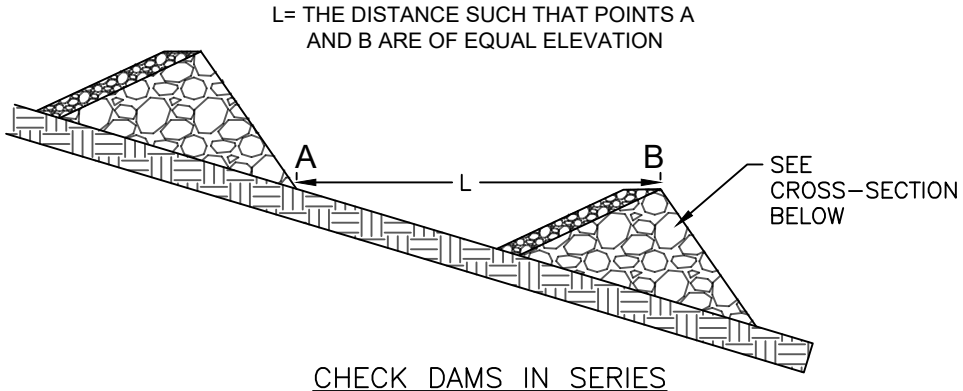
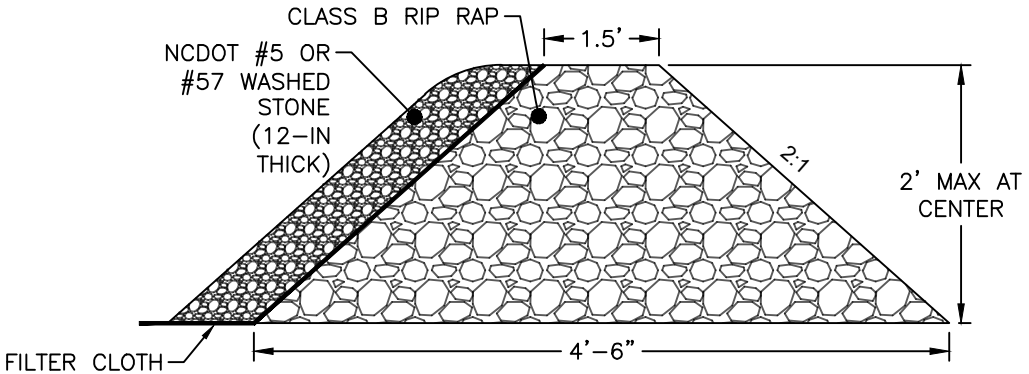
ROCK SPLASH PAD

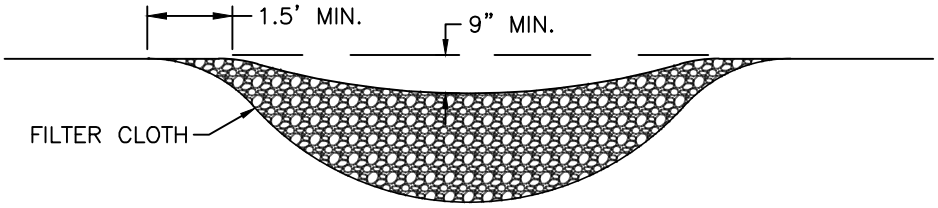
EC-3.00



CHECK DAMS IN SERIES



CROSS–SECTION VIEW



PROFILE VIEW
(FROM UPSTREAM)

" NOT TO SCALE "

NOTES:

1. PLACE STONE ON A FILTER FABRIC FOUNDATION.
2. THE CENTER STONE SECTION MUST BE AT LEAST 9 INCHES BELOW NATURAL GROUND LEVEL WHERE THE DAM ABUTS THE CHANNEL BANKS.
3. EXTEND STONE AT LEAST 1.5 FEET BEYOND THE DITCH BANK TO KEEP WATER FROM CUTTING AROUND THE ENDS OF THE CHECK DAM.
4. SET SPACING BETWEEN DAMS TO ASSURE THAT THE ELEVATION AT THE TOP OF THE LOWER DAM IS THE SAME AS THE TOE ELEVATION OF THE UPPER DAM.
5. PROTECT THE CHANNEL AFTER THE LOWEST CHECK DAM FROM HEAVY FLOW THAT COULD CAUSE EROSION.
6. MAKE SURE THE CHANNEL REACH ABOVE THE MOST UPSTREAM DAM IS STABLE.
7. ENSURE THAT OTHER AREAS OF THE CHANNEL, SUCH AS CULVERT ENTRANCES BELOW THE CHECK DAMS, ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONES.
8. RIPRAP AND FILTER FABRIC SHOULD BE KEYED IN TO PREVENT UNDER CUTTING.
9. ENDS OF CHECK DAMS MAY NEED TO BE TURNED UPHILL TO PREVENT BYPASS AND BETTER CONFORM TO SITE CONDITIONS.
10. DO NOT PLACE CHECK DAMS IN INTERMITTENT OR PERENNIAL STREAMS.

MAINTENANCE:

1. INSPECT CHECK DAMS AND CHANNELS AT LEAST WEEKLY AND AFTER EACH RAINFALL OF 1.0 INCH OR GREATER. CLEAN OUT SEDIMENT, STRAW, LIMBS OR OTHER DEBRIS THAT COULD CLOG THE CHANNEL WHEN NEEDED.
2. ANTICIPATE SUBMERGENCE AND DEPOSITION ABOVE THE CHECK DAM AND EROSION FROM HIGH FLOWS AROUND THE EDGES OF THE DAM. CORRECT ALL DAMAGE IMMEDIATELY. IF SIGNIFICANT EROSION OCCURS BETWEEN DAMS, ADDITIONAL MEASURES CAN BE TAKEN SUCH AS, INSTALLING A PROTECTIVE RIPRAP LINER IN THAT PORTION OF THE CHANNEL.
3. REMOVE SEDIMENT ACCUMULATED BEHIND THE DAMS AS NEEDED TO PREVENT DAMAGE TO CHANNEL VEGETATION, ALLOW THE CHANNEL TO DRAIN THROUGH THE STONE CHECK DAM, AND PREVENT LARGE FLOWS FROM CARRYING SEDIMENT OVER THE DAM. ADD STONES TO THE DAMS AS NEEDED TO MAINTAIN DESIGN HEIGHT AND CROSS SECTION.

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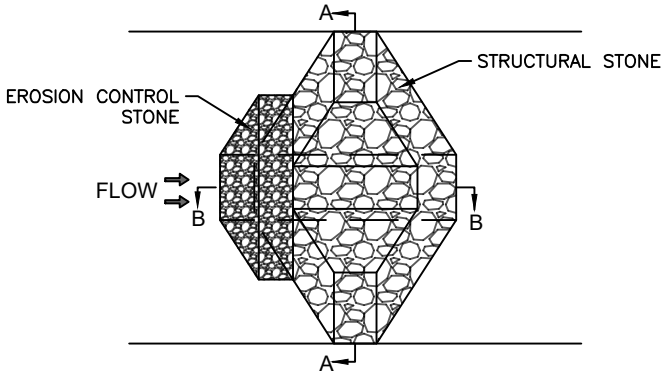
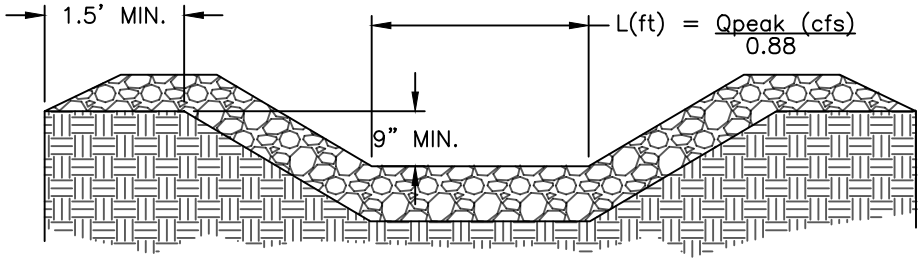
CHECK DAM

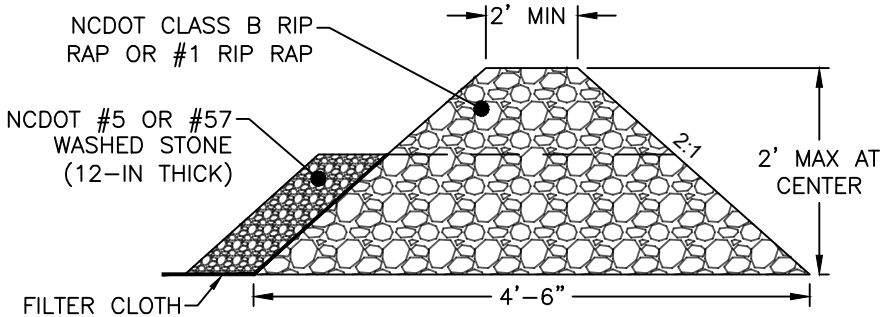
EC-4.00



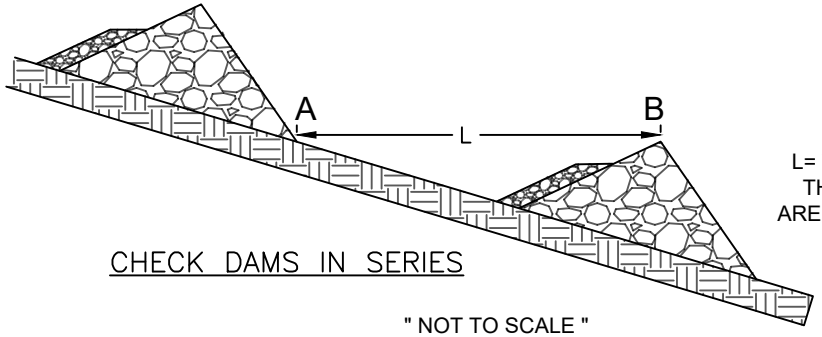
PLAN VIEW



SECTION A–A



SECTION B–B



CHECK DAMS IN SERIES

" NOT TO SCALE "

L= THE DISTANCE SUCH THAT POINTS A AND B ARE OF EQUAL ELEVATION

NOTES:

1. PLACE STONE ON A FILTER FABRIC FOUNDATION.
2. THE CENTER STONE SECTION MUST BE AT LEAST 9 INCHES BELOW NATURAL GROUND LEVEL WHERE THE DAM ABUTS THE CHANNEL BANKS.
3. PLACE SEDIMENT CONTROL STONE (NCDOT #5 OR #57) ON THE UPSTREAM SIDE OF THE DAM THAT IS A MINIMUM OF 1 FOOT THICK
4. EXTEND STONE AT LEAST 1.5 FEET BEYOND THE DITCH BANK TO KEEP WATER FROM CUTTING AROUND THE ENDS OF THE CHECK DAM.
5. PROVIDE AN APRON THAT IS 3 TIMES THE HEIGHT OF THE DAM. THE APRON WIDTH IS AT LEAST 4 FEET LONG. UNDERCUT THE APRON SO THAT THE TOP OF THE APRON IS FLUSH WITH THE SURROUNDING GRADE.
6. MAKE SURE THE CHANNEL REACH ABOVE THE MOST UPSTREAM DAM IS STABLE.
7. ENSURE THAT OTHER AREAS OF THE CHANNEL, SUCH AS CULVERT ENTRANCES BELOW THE CHECK DAMS, ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONES.
8. EXCAVATE SEDIMENT STORAGE AREA TO DIMENSIONS AS DIRECTED BY ENGINEER.
9. PROTECT THE CHANNEL AFTER THE LOWEST CHECK DAM FROM HEAVY FLOW THAT COULD CAUSE EROSION.
10. RIPRAP AND FILTER FABRIC SHOULD BE KEYED IN TO PREVENT UNDER CUTTING.
11. DO NOT PLACE CHECK DAMS IN INTERMITTENT OR PERENNIAL STREAMS.

MAINTENANCE:

1. INSPECT CHECK DAMS AND CHANNELS AT LEAST WEEKLY AND AFTER EACH RAINFALL OF 1.0 INCH OR GREATER. CLEAN OUT SEDIMENT, STRAW, LIMBS OR OTHER DEBRIS THAT COULD CLOG THE CHANNEL WHEN NEEDED.
2. ANTICIPATE SUBMERGENCE AND DEPOSITION ABOVE THE CHECK DAM AND EROSION FROM HIGH FLOWS AROUND THE EDGES OF THE DAM. CORRECT ALL DAMAGE IMMEDIATELY. IF SIGNIFICANT EROSION OCCURS BETWEEN DAMS, ADDITIONAL MEASURES CAN BE TAKEN SUCH AS, INSTALLING A PROTECTIVE RIPRAP LINER IN THAT PORTION OF THE CHANNEL.
3. REMOVE SEDIMENT ACCUMULATED BEHIND THE DAMS AS NEEDED TO PREVENT DAMAGE TO CHANNEL VEGETATION, ALLOW THE CHANNEL TO DRAIN THROUGH THE STONE CHECK DAM, AND PREVENT LARGE FLOWS FROM CARRYING SEDIMENT OVER THE DAM. ADD STONES TO THE DAMS AS NEEDED TO MAINTAIN DESIGN HEIGHT AND CROSS SECTION.

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CHECK DAM WITH WEIR

EC-4.01

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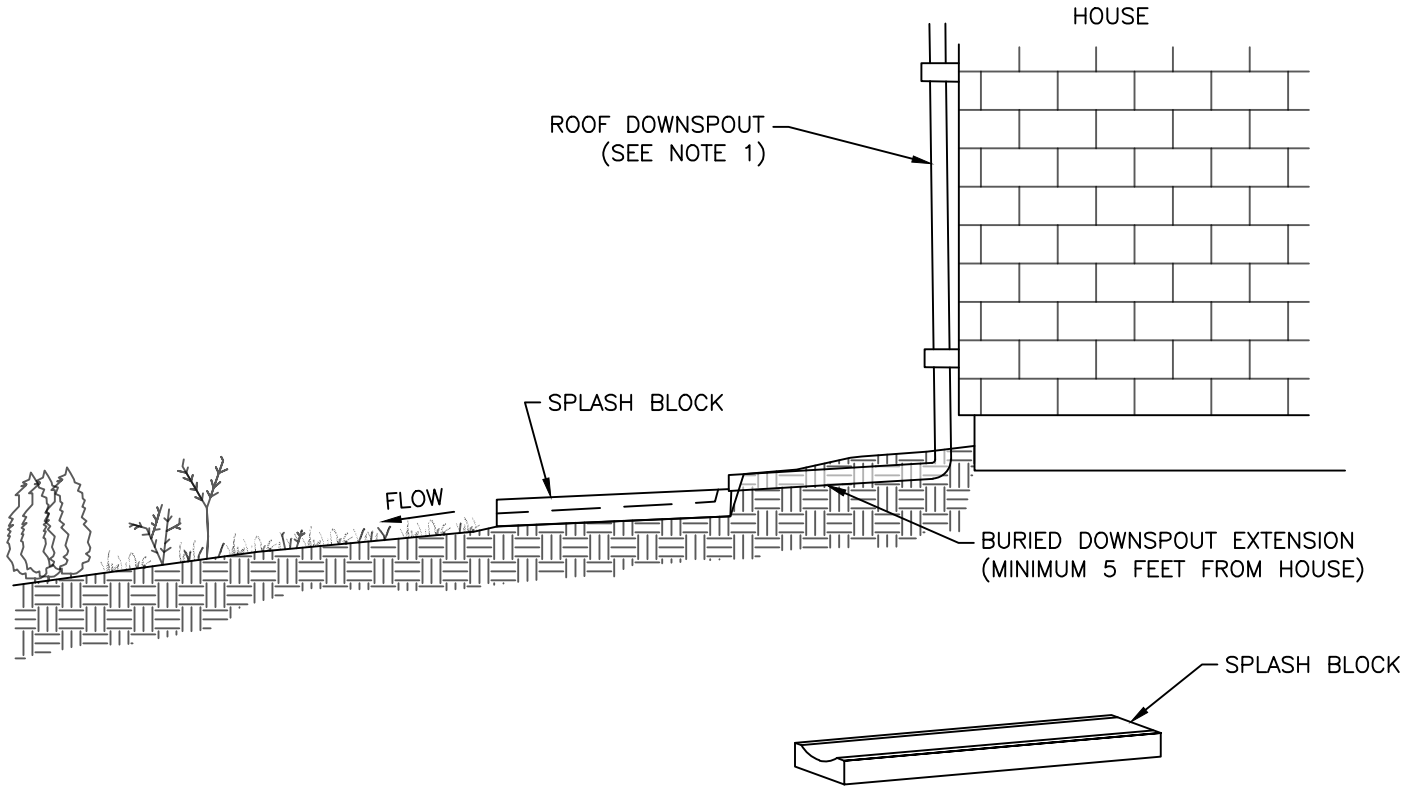

GENERAL NOTES:

1. NO MORE THAN 700 SQ. FT. OF ROOF AREA MAY BE DRAINED TO A SINGLE SPLASH BLOCK.

2. SPLASH BLOCK SHALL DRAIN TO A MINIMUM OF 50 FT. OF WELL ESTABLISHED VEGETATION. IF LESS THAN 50 FT OF WELL ESTABLISHED VEGETATION IS PRESENT THEN THE SPLASH BLOCK MUST DISCHARGE TO ROCK LEVEL SPREADER (SEE DETAIL EC-6.00)

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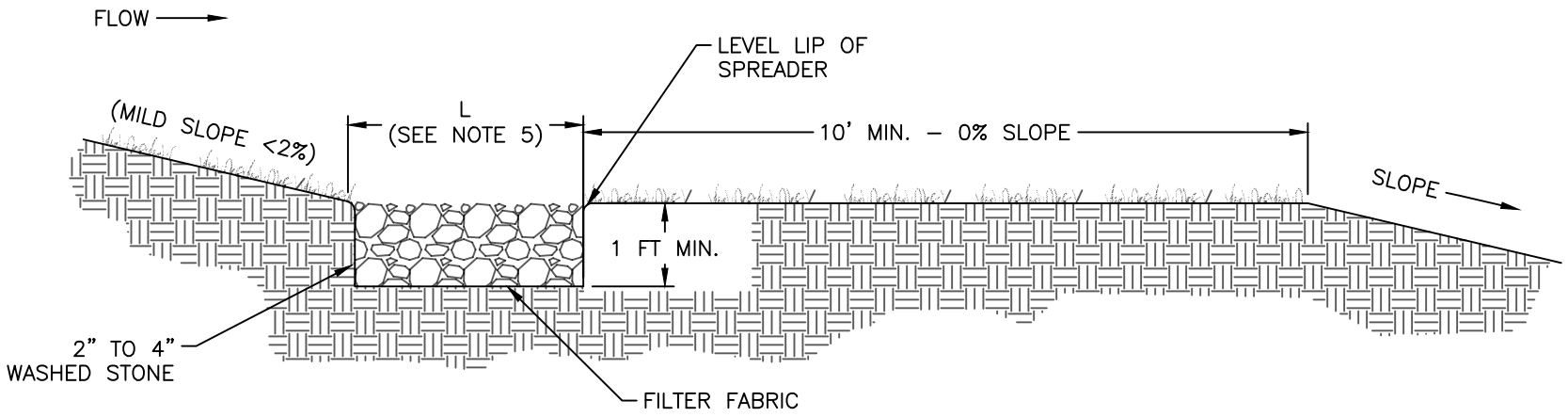
SPLASH BLOCK

EC-5.00



GENERAL NOTES:

1. THE LEVEL SPREADER FACILITY DESIGN MUST INCLUDE A MINIMUM 10' WIDE VEGETATED BUFFER BETWEEN THE LEVEL SPREADER AND THE SETBACK OR STREAM BUFFER BOUNDARY. THE RUNOFF FROM THE FACILITY SHALL MIMIC PRE–DEVELOPMENT SHEET FLOW RATE AND QUANTITY

2. CONSTRUCTION CONSIDERATIONS: LEVEL SPREADER AREAS SHOULD BE CONSTRUCTED ON NATIVE SOILS AND PROTECTED FROM CONSTRUCTION ACTIVITIES NOTE RELATED TO THE LEVEL SPREADER CONSTRUCITON. THE RECEIVING AREA BELOW THE LEVEL SPREADER SHOULD ALSO BE PROTECTED FROM DISTURBANCE DURING CONSTRUCTION. DISTURBED AREAS SHALL BE STABILIZED WITH VEGETATED MEASURES. LEVEL SPREADERS MUST BE CONSTRUCTED LEVEL TO DISTRBUTE FLOWS EVENLY ACROSS THE FILTER

3. THE DOWNSTREAM SIDE OF THE LEVEL SPREADER MUST BE FULLY STABILIZED BEFORE THE LEVEL SPREADER IS ACTIVATED. IF A LEVEL SPREADER IS INSTALLED ABOVE A DISTURBED AREA WITHOUT SUFFICIENT ESTABLISHED VEGEATIVE COVER OR OTHER ADEQUATE GROUND COVER, SUCH AS CONSTRUCTION MATTING (STRAW–COCONUT BLANKET), EROSION RILLS WILL QUICKLY FORM. EVEN SHEET FLOW CAN CAUSE SIGNIFICANT DOWNSTREAM EROSION ON DISTURBED AREAS.

4. FILTER FABRIC MUST BE INSTALLED BETWEEN ROCK AND SOIL.

5. L IS THE LENGTH OF THE ROCK LEVEL SPREADER, MEASURED IN THE DIRECTION OF FLOW. THE LENGTH SHALL BE EQUAL TO 4 TIMES THE DRAIN WIDTH OR DIAMETER, BUT NOT LESS THAN 2 FEET.

6. THE WIDTH OF THE ROCK LEVEL SPREADER, MEASURED PERPENDICULAR TO THE DIRECTION OF FLOW, SHALL BE A MINIMUM OF 2 FEET, CENTERED ON ROOF DRAIN OR PIPE.

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ROCK LEVEL SPREADER

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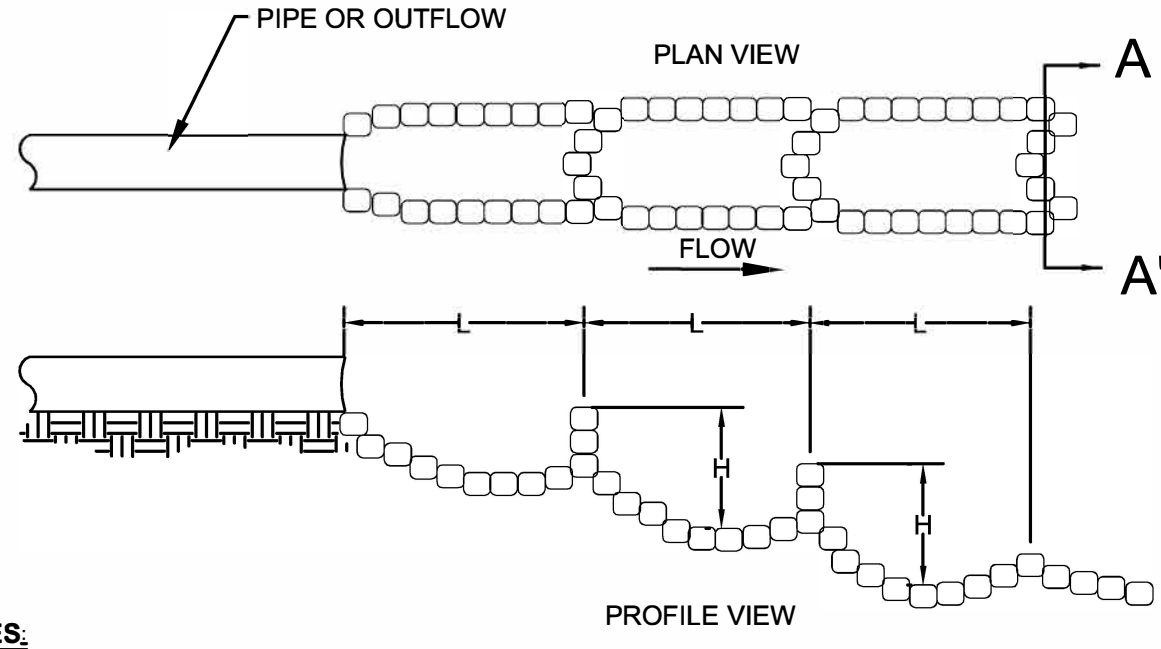
EC-6.00



GENERAL NOTES:

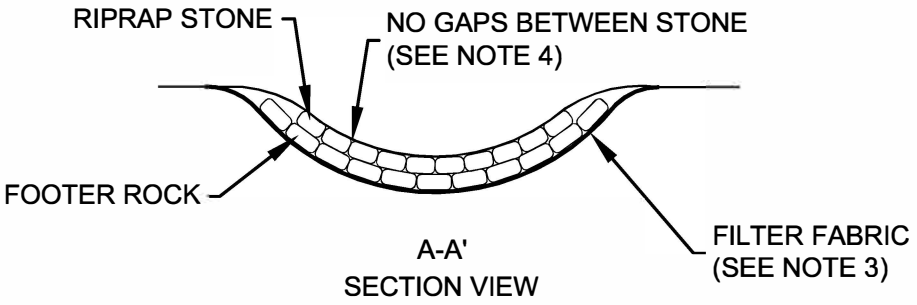
1. **L IS THE STEP LENGTH. THE LENGTH SHALL BE 1 TO 4 TIMES THE WIDTH OF THE CHANNEL.**

2. **H IS THE STEP HEIGHT. THE HEIGHT SHALL SATISFY THE EQUATION (1<(H/L)$_{AVE}$ /S<2) WHERE S IS THE CHANNEL SLOPE.**

3. **INSTALL FILTER FABRIC UNDER FOOTER STONES BURIED BELOW THE CHANNEL INVERT.**

4. **CONSTRUCT WEIR STEPS ON THE FOOTER STONES WITH THE LOW POINT IN THE CENTER OF THE STEP. ABUT STONES CLOSE TOGETHER SO THAT THERE ARE NO GAPS BETWEEN THE STONES.**

5. **THE WATER DEPTH BEHIND THE WEIR SHOULD BE HALF THE STEP DEPTH (0.5H).**



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TOWN OF CHAPEL HILL

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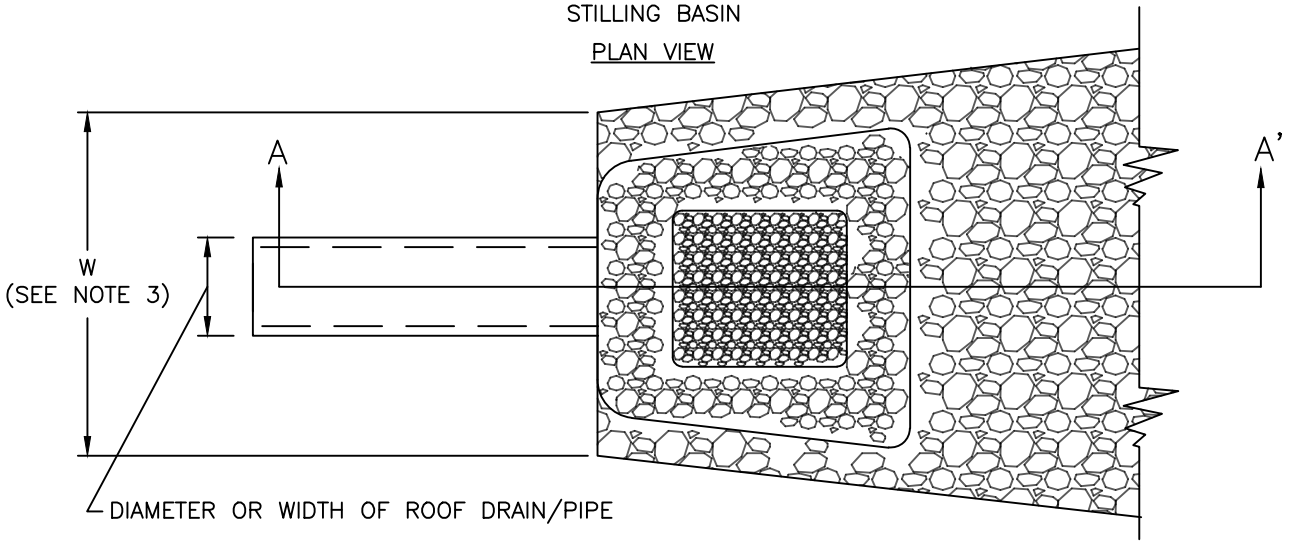
STEEP SLOPES

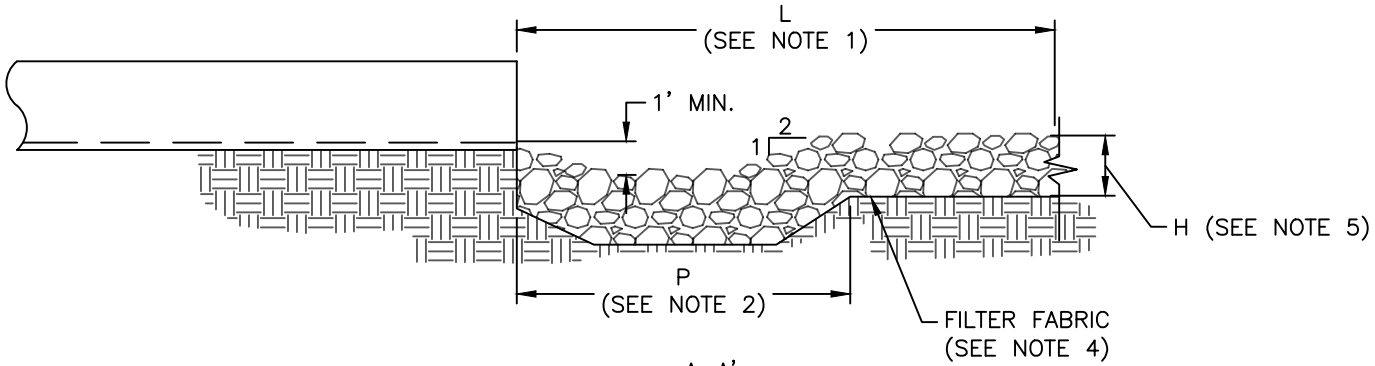
DATE: 02/2017

EC-7.00

STILLING BASIN

PLAN VIEW





A–A'

SECTION VIEW

GENERAL NOTES:

1. L IS THE TOTAL LENGTH OF THE RIPRAP APRON. THE MINIMUM LENGTH SHALL BE: L=P+1.
2. P IS THE POOL LENGTH. THE MINIMUM POOL LENGTH SHALL BE 3 TIMES THE DIAMETER OR WIDTH OF THE PIPE, BUT NOT LESS THAN 2 FEET.
3. W IS THE WIDTH OF THE RIPRRAP APRON. THE MINIMUM WIDTH SHALL BE 3 TIMES THE DIAMETER OR WIDTH OF THE PIPE, BUT NOT LESS THAN 2 FEET.
4. FILTER FABRIC MUST BE INSTALLED BETWEEN RIPRAP AND SOIL
5. H IS THE DEPTH OF THE STONE. FOR STONE WITH A D^{50}=4 INCHES, THE STONE DEPTH SHALL BE A MINIMUM OF 9 INCHES. FOR STONE WITH A D^{50}=6 INCHES, THE STONE DEPTH SHALL BE A MINIMUM OF 12 INCHES.

MAINTENANCE:

1. INSPECT BASIN AT LEAST WEEKLY AND AFTER EACH RAINFALL OF 1.0 INCH OR GREATER, LOOKING FOR INDICATION OF ROCK WASHOUT, PIPING, SCOUR HOLES, OR BANK FAILURES. MAKE ANY REPAIRS IMMEDIATELY.
2. MAINTAIN ALL VEGETATION ADJACENT TO PAD IN A HEALTHY, VIGOROUS CONDITION.
3. RESTORE STONE IN AREAS THAT HAVE LESS THAN THE MINIMUM THICKNESS

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STILLING BASIN

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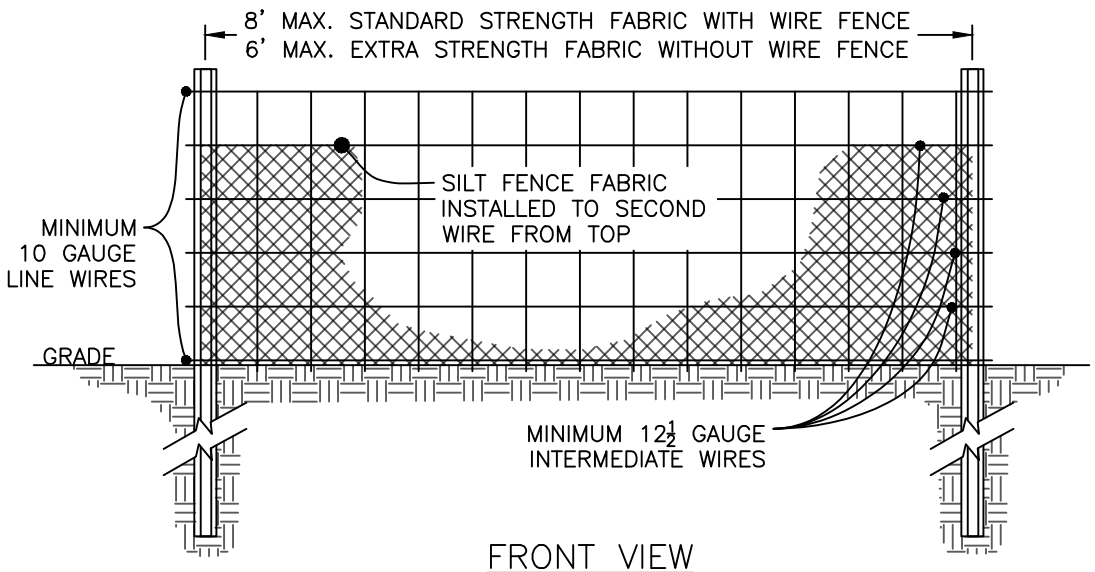
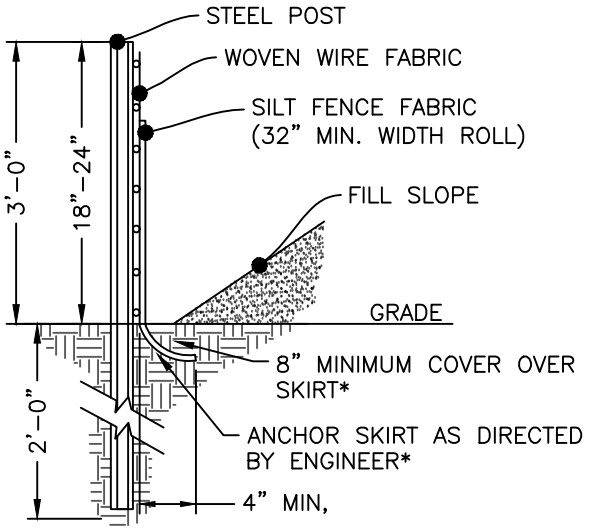


FRONT VIEW



SIDE VIEW

NOTES:

1. CONSTRUCT THE SEDIMENT BARRIER OF STANDARD STRENGTH OR EXTRA STRENGTH SYNTHETIC FILTER FABRICS.
2. CONSTRUCT THE FILTER FABRIC FROM A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID JOINTS. WHEN JOINTS ARE NECESSARY, SECURELY FASTEN THE FILTER CLOTH ONLY AT A SUPPORT POST WITH 4 FEET MINIMUM OVERLAP TO THE NEXT POST.
3. SUPPORT STANDARD STRENGTH FILTER FABRIC BY WIRE MESH FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS. EXTEND THE WIRE MESH SUPPORT TO THE BOTTOM OF THE TRENCH. FASTEN THE WIRE REINFORCEMENT, THEN FABRIC ON THE UPSLOPE SIDE OF THE FENCE POST. WIRE OR PLASTIC ZIP TIES SHOULD HAVE A MINIMUM 50 POUND TENSILE STRENGTH.
4. WHEN A WIRE MESH SUPPORT FENCE IS USED, SPACE POSTS A MAXIMUM OF 8 FEET APART. SUPPORTS SHOULD BE DRIVEN SECURELY INTO THE GROUND A MINIMUM OF 24 INCHES. WIRE MESH SHOULD BE A MINIMUM 14-GAUGE WITH 6 INCH MESH SPACING.
5. EXTRA STRENGTH FILTER FABRIC WITH 6 FOOT POST SPACING DOES NOT REQUIRE A WIRE MESH SUPPORT FENCE. SECURELY FASTEN THE FILTER FABRIC DIRECTLY TO POSTS. WIRE OR PLASTIC ZIP TIES SHOULD HAVE A MINIMUM OF 50 POUND TENSILE STRENGTH.
6. EXCAVATE THE TRENCH APPROXIMATELY 4 INCHES WIDE AND 8 INCHES DEEP ALONG THE PROPOSED LINE OF THE POSTS AND UPSLOPE FROM THE BARRIER.
7. PLACE 12 INCHES OF FABRIC ALONG THE BOTTOM AND SIDE OF THE TRENCH.
8. BACKFILL THE TRENCH WITH SOIL PLACED OVER THE FILTER FABRIC AND COMPACT. THOROUGH COMPACTION OF THE BACKFILL IS CRITICAL TO SILT FENCE PERFORMANCE.
9. DO NOT ATTACH FILTER FABRIC TO EXISTING TREES.
10. DO NOT PLACE ACROSS DITCHES, STREAMS, OR ANY OTHER AREAS OF CONCENTRATED FLOW.
11. USE SILT FENCE ONLY WHEN DRAINAGE AREA DOES NOT EXCEED 1/4 ACRE AND NEVER IN AREAS OF CONCENTRATED FLOW
12. FOR REPAIR OF SILT FENCE FAILURES USE DETAIL EC-10.00

" NOT TO SCALE "

MAINTENANCE:

1. INSPECT ALL MEASURES AT LEAST WEEKLY AND AFTER EACH RAINFALL OF 1.0 INCH OR GREATER. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
2. SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.
3. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUTS.
4. REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

MAX. SLOPE LENGTH AND SLOPE FOR WHICH STANDARD SILT FENCE IS APPLICABLE

SLOPE	SLOPE LENGTH (FT)	MAX. AREA (FT^2)
<2%	100	10,000
2 to 5%	75	7,500
5 to 10%	50	5,000
10 to 20%	25	2,500
>20%	15	1,500

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STANDARD SILT FENCE

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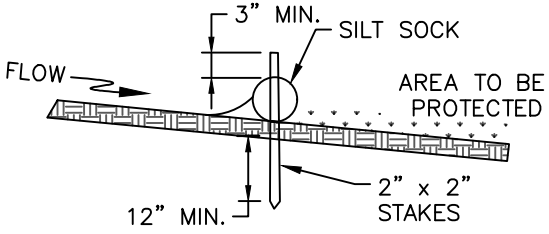
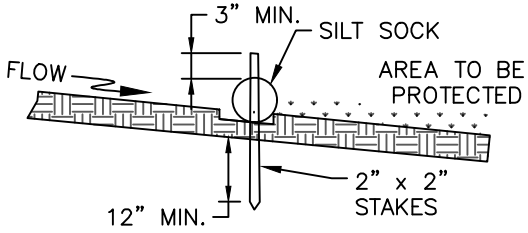


SECTION



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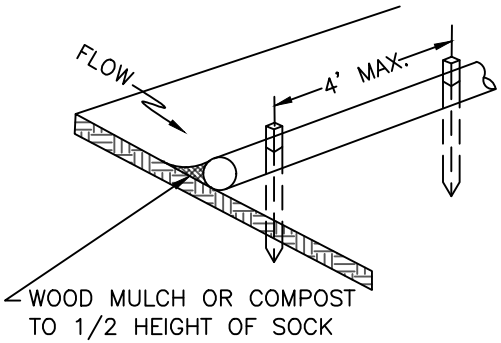
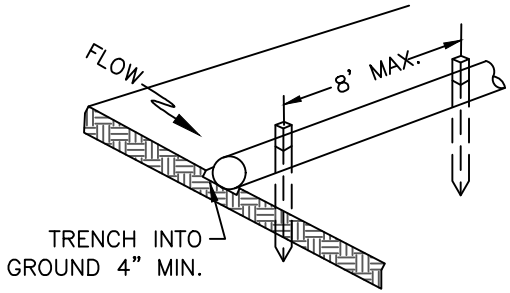
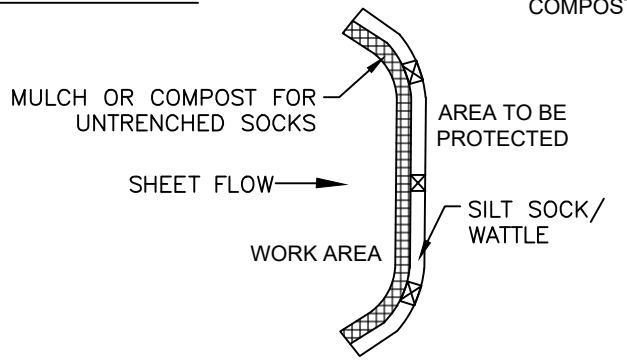


UNTRENCHED INSTALLATION
ISOMETRIC VIEW



ENTRENCHED INSTALLATION*

*THIS APPLICATION MAY NOT BE USED WITH COMPOST SOCKS SMALLER THAN 12".



PLAN VIEW

NOTES:

1. OTHER MATERIALS PROVIDING EQUIVALENT PROTECTION AGAINST EROSIVE VELOCITIES MAY BE SUBSTITUTED FOR COMPOST USE IN SILT SOCKS.
2. FILL SILT SOCK NETTING UNIFORMLY WITH COMPOST TO THE DESIRED LENGTH SUCH THAT LOGS DO NOT DEFORM.
3. SILT SOCK SHOULD BE INSTALLED PARALLEL TO AND A MINIMUM OF 10 FEET BEYOND THE TOE OF A GRADED SLOPE. SILT SOCK(S) LOCATED BELOW FLAT AREAS SHOULD BE LOCATED AT THE EDGE OF THE LAND DISTURBANCE. THE ENDS OF THE SILT SOCK(S) SHOULD BE TURNED SLIGHTLY UPSLOPE TO PREVENT RUNOFF FROM GOING AROUND THE END OF THE SILT SOCK(S).
4. OAK OR OTHER DURABLE HARDWOOD STAKES WITH A 2–INCH X 2–INCH CROSS SECTION SHOULD BE DRIVEN VERTICALLY PLUMB, THROUGH THE CENTER OF THE SILT SOCK. STAKES SHOULD BE PLACED AT A MAXIMUM INTERVAL OF 4–FEET OR A MAXIMUM INTERVAL OF 8–FEET IF THE SILT SOCK IS PLACED IN A 4–INCH TRENCH.
5. IN THE EVENT STAKING IS NOT POSSIBLE (IE. WHEN SOCKS ARE USED ON PAVEMENT) HEAVY CONCRETE BLOCKS SHALL BE USED BEHIND THE SILT SOCK TO HOLD IT IN PLACE DURING RUNOFF EVENTS.

MAINTENANCE:

1. INSPECT ALL MEASURES AT LEAST WEEKLY AND AFTER EACH RAINFALL OF 1.0 INCH OR GREATER.
2. REMOVE ACCUMULATED SEDIMENT AND ANY DEBRIS AS NEEDED TO ALLOW FOR ADEQUATE FLOW.
3. SILT SOCK MUST BE REPLACED IF CLOGGED OR TORN.
4. IF PONDING BECOMES EXCESSIVE, THE SILT SOCK MAY NEED TO BE REPLACED WITH A LARGER DIAMETER OR A DIFFERENT MEASURE.
5. REINSTALL IF DAMAGED OR DISLODGED.
6. SILT SOCKS SHALL BE INSPECTED UNTIL LAND DISTURBANCE IS COMPETE AND THE AREA ABOVE THE MEASURE HAS BEEN PERMANENTLY STABILIZED.

SILT SOCK INITIAL FLOW RATES					
Compost Sock Design Diameter	8 Inch (200 nm)	12 Inch (300 nm)	18 Inch (450 nm)	24 Inch (600 nm)	32 Inch (750 nm)
Maximum Slope Length (<2%)	600 Feet (183 m)	750 Feet (229 m)	1,000 Feet (305 m)	1,300 Feet (396 m)	1,650 Feet (500 m)
Hydraulic Flow Through Rate	7.5 gpm/ft (94 l/m/m)	11.3 gpm/ft (141 l/m/m)	15.0 gpm/ft (188 l/m/m)	22.5 gpm/ft (281 l/m/m)	30.0 gpm/ft (374 l/m/m)

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STANDARD SILT SOCK

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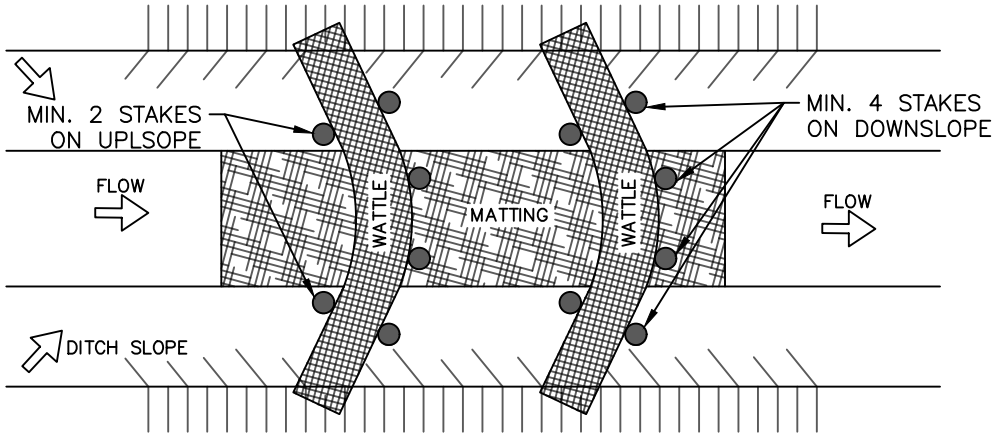
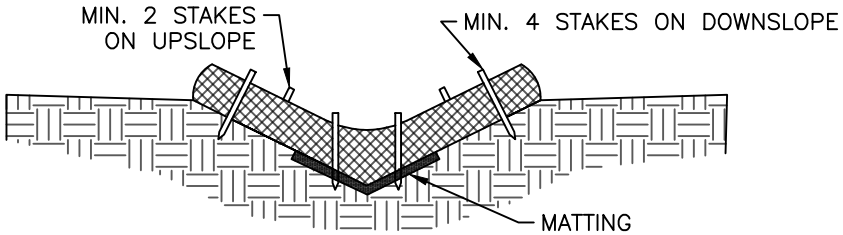
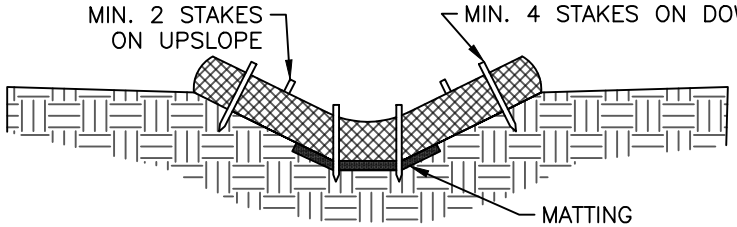


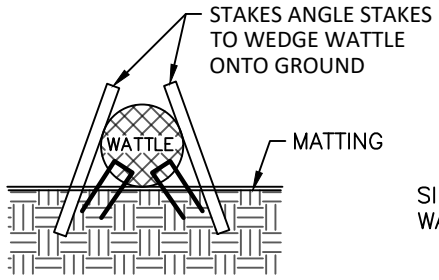
PLAN VIEW



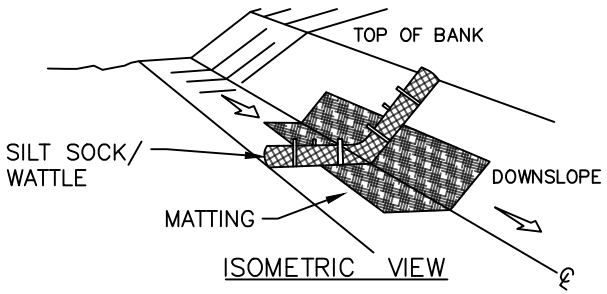
V– DITCH SECTION VIEW



TRAPEZOIDAL DITCH SECTION VIEW



STAKE INSTALLATION CROSS–SECTION



ISOMETRIC VIEW

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NOTES:

1. OTHER MATERIALS PROVIDING EQUIVALENT PROTECTION AGAINST EROSIVE VELOCITIES MAY BE SUBSTITUTED FOR COMPOST USE IN SILT SOCKS OR WATTLES.
2. FILL SILT SOCK/WATTLE NETTING UNIFORMLY TO THE DESIRED LENGTH SUCH THAT LOGS DO NOT DEFORM.
3. USE 24 INCH LONG WOODEN STAKES WITH A 2 INCH X 2 INCH NOMINAL CROSS SECTION.
4. INSTALL SILT SOCK/WATTLE(S) TO A HEIGHT ON SLOPE SO FLOW WILL NOT WASH AROUND SILT SOCK/WATTLE AND SCOUR SLOPES, OR AS DIRECTED.
5. INSTALL A MINIMUM OF TWO UP–SLOPE STAKES AND FOUR DOWN–SLOPE STAKES AT AN ANGLE TO WEDGE SILT SOCK/WATTLE TO GROUND AT BOTTOM DITCH. USE STAPLES TO SECURE SILT SOCK/WATTLE TO THE GROUND TO PREVENT UNDERMINING.
6. THE USE OF FLOCCULANTS SUCH AS POLYACRYLAMIDE (PAM) IS RECOMMENDED. APPLY FLOCCULANTS ON TOP OF SOCK/WATTLE AND TO MATTING ON EITHER SIDE OF SOCK/WATTLE ACCORDING TO MANUFACTURER RECOMMENDED RATES. REAPPLY AFTER EACH 1.0 INCH RAINFALL.

MAINTENANCE:

1. INSPECT ALL MEASURES WEEKLY AND AFTER EACH RAINFALL OF 1.0 INCH OR GREATER. REMOVE ACCUMULATED SEDIMENT AND ANY DEBRIS.
2. SILT SOCK/WATTLE(S) MUST BE REPLACED IF CLOGGED OR TORN.
3. IF PONDING BECOMES EXCESSIVE, THE SILT SOCK/WATTLE MAY NEED TO BE REPLACED WITH A LARGER DIAMETER OR A DIFFERENT MEASURE.
4. REINSTALL IF DAMAGED OR DISLODGED.
5. SILT SOCKS/WATTLES SHALL BE INSPECTED UNTIL LAND DISTURBANCE IS COMPETE AND THE AREA ABOVE THE MEASURE IS PERMANENTLY STABILIZED.

Spacing Between Socks / Wattles (Feet)

Channel Slope (%)	8–inch Diameter Sock	12–inch Diameter Sock
1	67	100
2	33	50
3	22	33
4	17	25
5	13	20

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SILT SOCK/ WATTLE FOR CHECK DAM

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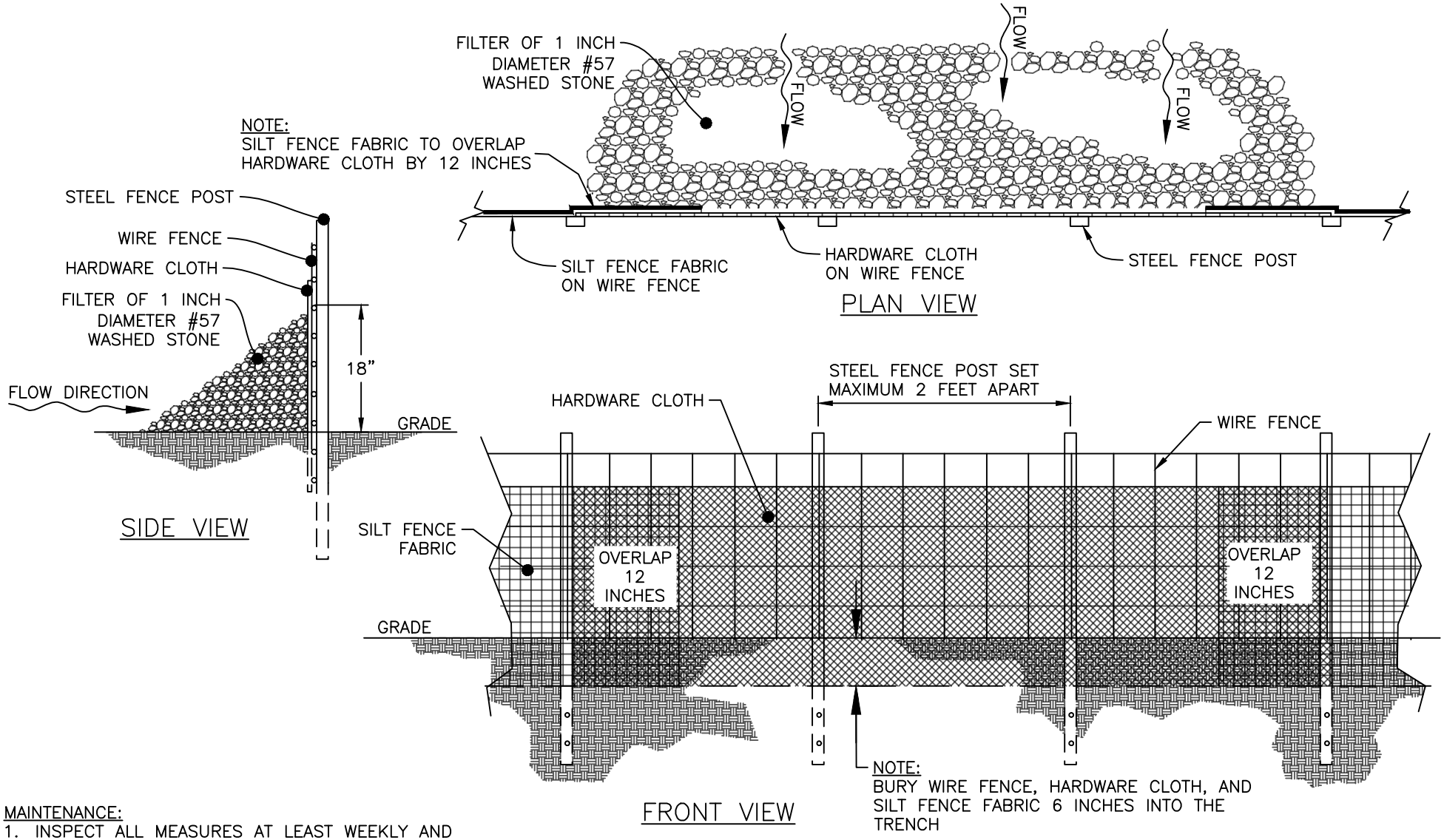

MAINTENANCE:

1. INSPECT ALL MEASURES AT LEAST WEEKLY AND AFTER EACH RAINFALL OF 1.0 INCH OR GREATER.
2. REMOVE ACCUMULATED SEDIMENT AND ANY DEBRIS AS NEEDED TO ALLOW FOR ADEQUATE FLOW.
3. INSTALL ADDITIONAL WASHED STONE, OR OTHERWISE RE-FORM SILT FENCE OUTLET, IF HEIGHT OF STONE FALLS BELOW 18-IN.
4. PERIMETER CONTROLS SHALL BE INSPECTED UNTIL LAND DISTURBANCE IS COMPETE AND THE AREA ABOVE THE MEASURE HAS BEEN PERMANENTLY STABILIZED.

NOTE:
USE SILT FENCE OUTLETS ONLY WHEN DRAINAGE AREA DOES NOT EXCEED 1/4 ACRE AND THERE IS LOW AREA. USE AS A REPAIR OF SILT FENCE FAILURES

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STANDARD SILT FENCE OUTLET

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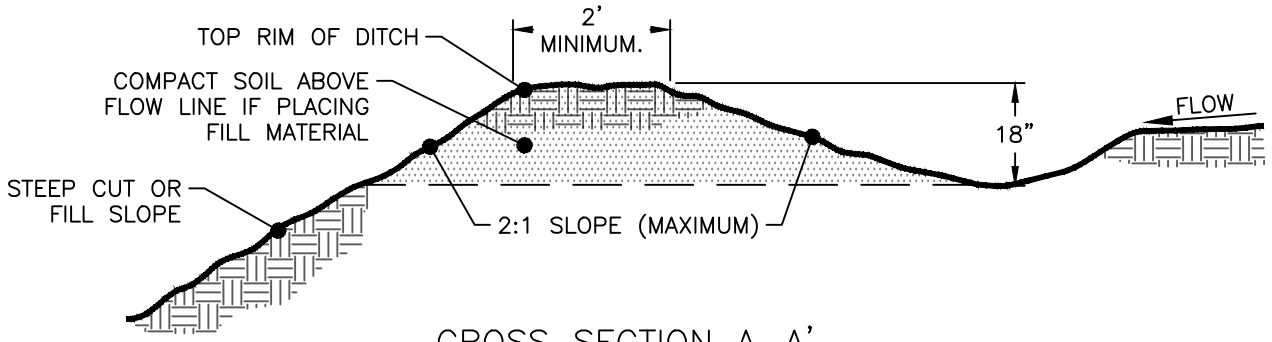
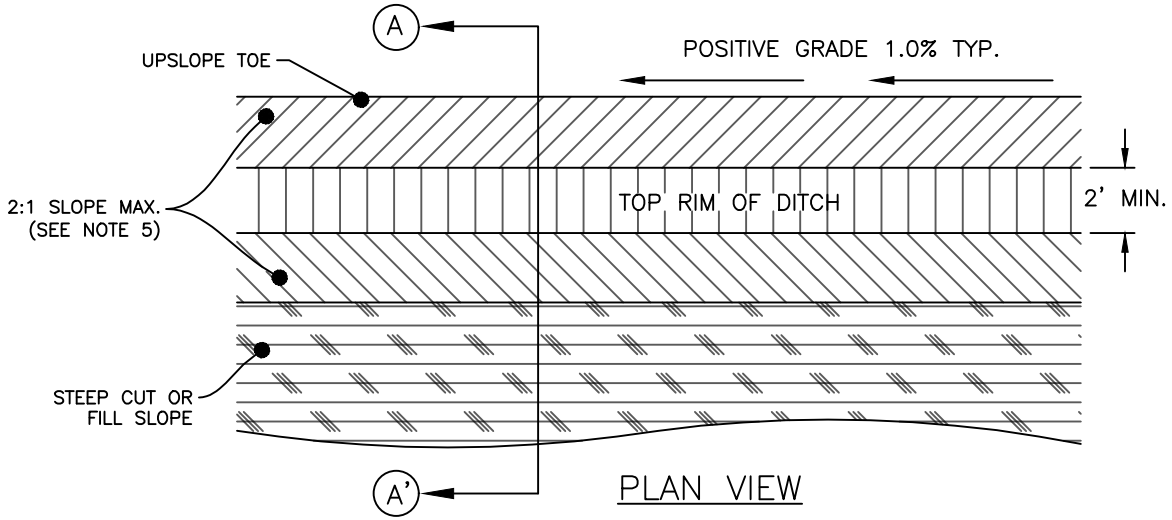
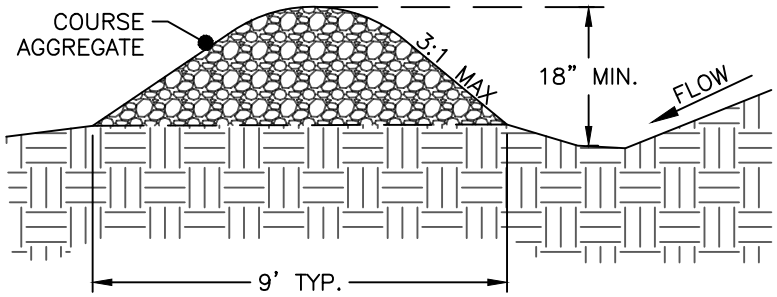


CROSS SECTION A–A'



PLAN VIEW



TEMPORARY GRAVEL DIVERSION DIKE
FOR VEHICLE CROSSING

" NOT TO SCALE "

NOTES:
1. REMOVE AND PROPERLY DISPOSE OF ALL TREE, BRUSH, STUMPS, AND OTHER OBJECTIONABLE MATERIAL.
2. TEMPORARY DIVERSIONS ARE TO ONLY BE USED FOR DRAINAGE AREAS OF 5 ACRES OR LESS.
3. RIDGES WILL HAVE A 2 FEET MINIMUM TOP WIDTH, 2:1 OR FLATTER SIDE SLOPES AND A MINIMUM OF 0.3 FEET FREEBOARD.
4. CHANNELS WILL HAVE A PARABOLIC, TRAPEZOIDAL, OR V SHAPE WITH SIDE SLOPES OF 2:1 OR FLATTER.
5. ANY POINT WHERE VEHICLES WILL BE CROSSING SHOULD HAVE 3:1 OR FLATTER SIDE SLOPES.
6. ENSURE THE TOP OF THE DIKE IS NOT LOWER AT ANY POINT THAN THE DESIGN ELEVATION PLUS THE SPECIFIED SETTLEMENT.
7. PROVIDE SUFFICIENT ROOM AROUND DIVERSIONS TO PERMIT MACHINE RE–GRADING AND CLEANOUT.
8. VEGETATE THE RIDGE IMMEDIATELY AFTER CONSTRUCTION UNLESS IT WILL REMAIN IN PLACE LESS THAN 30 WORKING DAYS. STABILIZE DIVERSION DITCH WITH TEMPORARY SEEDING AND EROSION CONTROL NETTING.

MAINTENANCE:
1. INSPECT ALL MEASURES AT LEAST WEEKLY AND AFTER EVERY RAINFALL OF 1.0 INCH OR GREATER.
2. MAKE ALL REPAIRS IMMEDIATELY.
3. IMMEDIATELY REMOVE ANY SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION RIDGE.
4. CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED.

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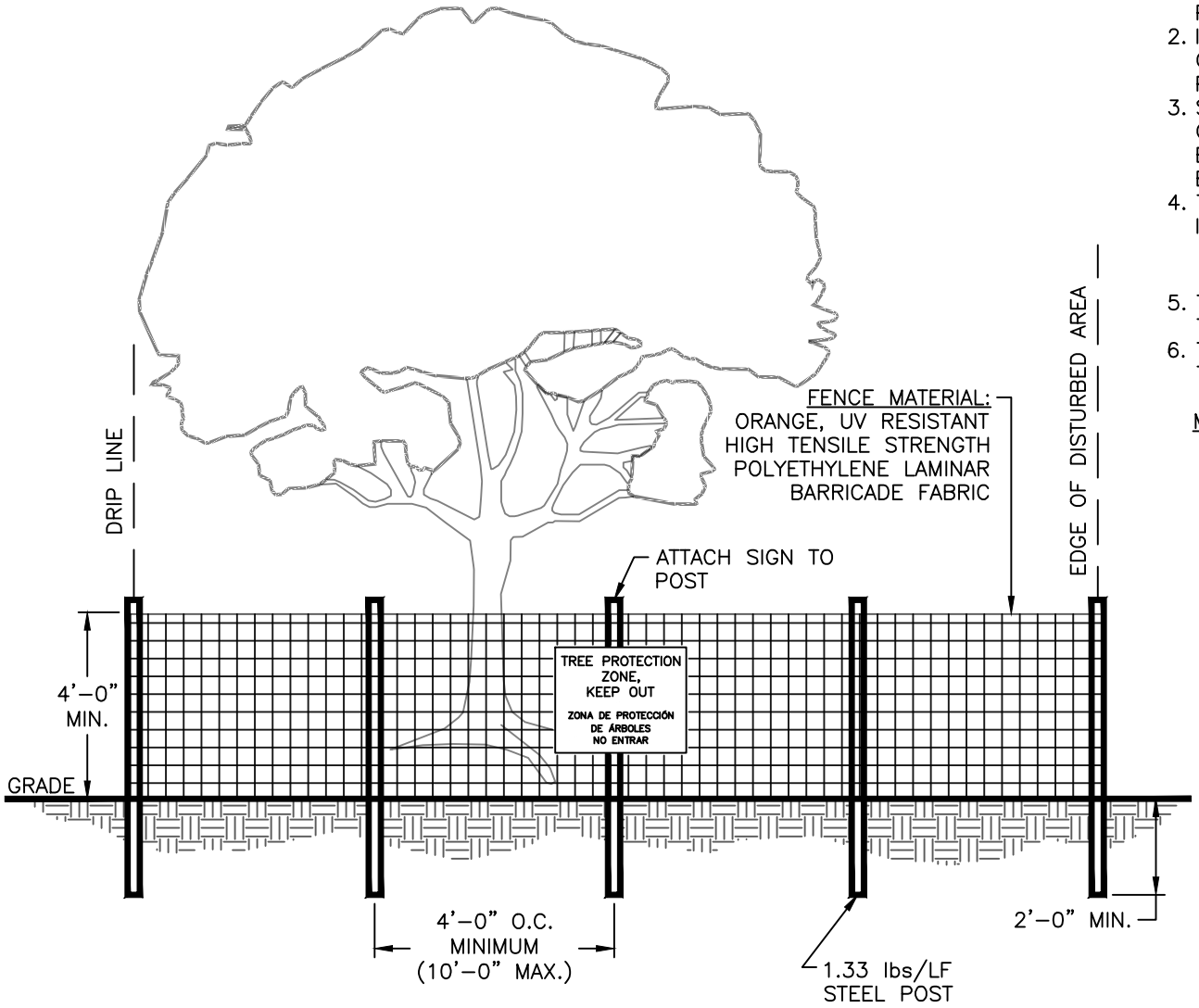

NOTES:

1. ALL PLANTS DESIGNATED TO BE SAVED SHALL BE PROTECTED BY FENCING, AS ILLUSTRATED.
2. INSTALL TREE PROTECTION FENCE AT TREE DRIP LINE OR AT EDGE OF DISTURBED AREA, AS SHOWN ON PLANS, PRIOR TO COMMENCEMENT OF CONSTRUCTION.
3. SPACE TREE PROTECTION ZONE SIGNS A MINIMUM OF ONE EVERY 300–FT. THE SIZE OF EACH SIGN MUST BE A MINIMUM 2–FT X 2–FT AND BE VISIBLE FROM BOTH SIDES OF THE FENCE.
4. THE SIGN MUST CONTAINING THE FOLLOWING LANGUAGE IN BOTH ENGLISH & SPANISH:
   "TREE PROTECTION ZONE, KEEP OUT."
   "ZONA DE PROTECCIÓN DE ÁRBOLES, NO ENTRAR"
5. THERE SHALL BE NO STORAGE OF MATERIAL WITHIN THE BOUNDARIES OF THE TREE PROTECTION FENCING
6. TREE PROTECTION FENCING SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT.

MAINTENANCE

1. TREE PROTECTION FENCES SHALL BE CHECKED WEEKLY BY SITE STAFF. REPLACE OR REPAIR DAMAGED TREE PROTECTION FENCING.
2. TREE HEALTH SHALL BE MONITORED BY TRAINED STAFF DURING AND AFTER CONSTRUCTION ACTIVITIES ON A FREQUENT, REGULAR BASIS.
3. PRUNE ANY DAMAGED TREES. IN SPITE OF PRECAUTIONS, SOME DAMAGE TO PROTECTED TREES MAY OCCUR. IN SUCH CASES, REPAIR ANY DAMAGE TO THE CROWN, TRUNK, OR ROOT SYSTEM IMMEDIATELY
4. REPAIR ROOTS BY CUTTING OFF THE DAMAGED AREAS AND PAINTING THEM WITH TREE PAINT. SPREAD PEAT MOSS OR MOIST TOPSOIL OVER EXPOSED ROOTS.
5. REPAIR DAMAGE TO BARK BY TRIMMING AROUND THE DAMAGED AREA, TAPER THE CUT TO PROVIDE DRAINAGE AND PAINT WITH TREE PAINT.
6. CUT OFF ALL DAMAGED TREE LIMBS ABOVE THE TREE COLLAR AT THE TRUNK OR MAIN BRANCH. USE THREE SEPARATE CUTS TO AVOID PEELING BARK FROM HEALTHY AREAS OF THE TREE.

MATURE TREE PROTECTION ZONE RADIUS			
TRUNK DIAMETER	GOOD PROTECTION	BETTER PROTECTION	BEST PROTECTION
8 INCHES	10 FEET	12 FEET	20 FEET
12 INCHES	15 FEET	18 FEET	30 FEET
16 INCHES	20 FEET	24 FEET	40 FEET
20 INCHES	25 FEET	30 FEET	50 FEET

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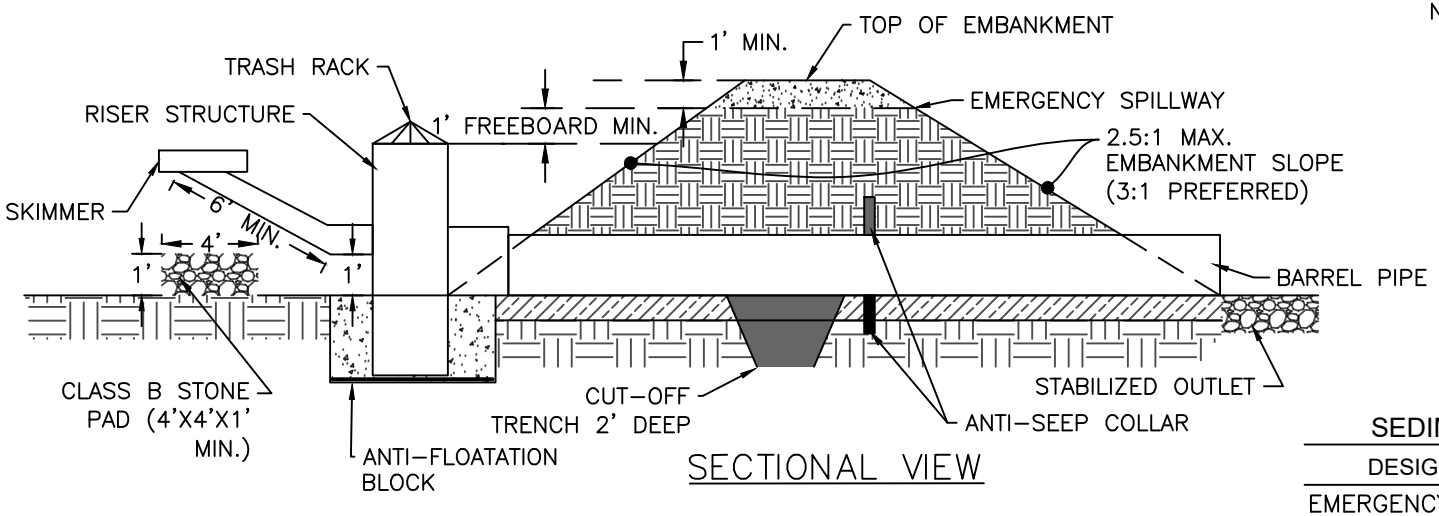
TREE PROTECTION FENCE

EC-12.00



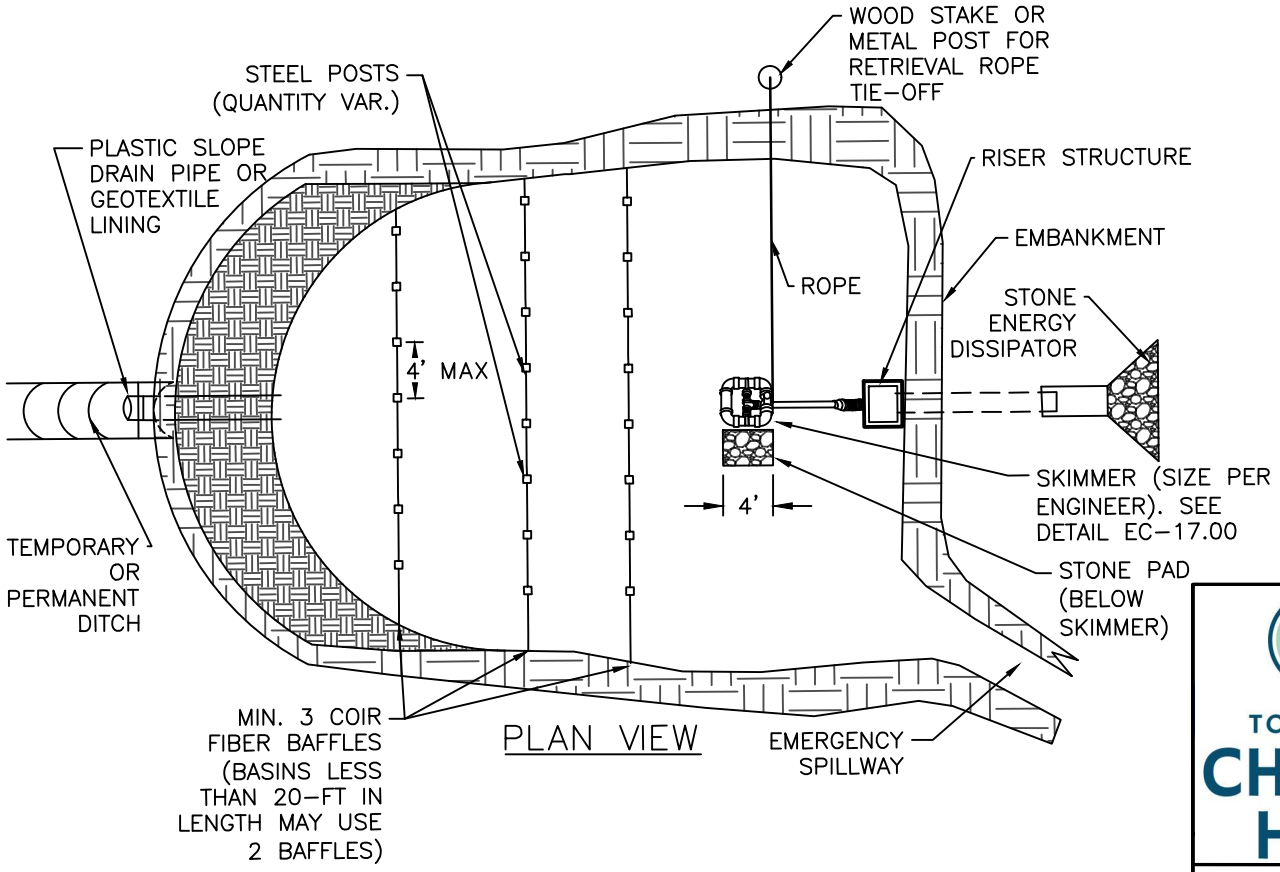
SECTIONAL VIEW

NOTES:

1. SEE TOWN OF CHAPEL HILL (TOCH) DETAIL EC-13.01 FOR SEDIMENT BASIN NOTES AND MAINTENANCE REQUIREMENTS
2. SEE TOCH DETAIL EC-13.02 FOR DETAILS FOR BAFFLES
3. SEE TOCH DETAIL EC-17.00 FOR SKIMMER DETAIL
4. SITE DESIGN ENGINEER SHALL COMPLETE SEDIMENT BASIN DIMENSIONAL TABLE BELOW

SEDIMENT BASIN DIMENSIONAL TABLE

DESIGN ELEMENT	DIMENSIONS	ELEV.
EMERGENCY SPILLWAY		
TOP OF DAM WIDTH		
ANTI-SEEP COLLAR		
RIP RAP DISSIPATER PAD		
ANTI-FLOATATION DEVICE		
TOP OF RISER		
OUTLET PIPE INVERT IN		
OUTLET PIPE INVERT OUT		
SEDIMENT STORAGE AREA		



PLAN VIEW

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ACCEPTABLE DIMENSIONS FOR BASIN EMBANKMENT	
FILL HEIGHT	**MINIMUM TOP WIDTH**
LESS THAN 10.0 FT	8.00 Ft
10.0 FT TO 15.0 FT	10.00 Ft

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STANDARD RISER-BARREL SEDIMENT BASIN (WITH SKIMMER)

EC-13.00

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NOTES:

1. INSTALL TEMPORARY SEDIMENT BASINS TO THE APPROVED DESIGN. IF THE BASIN WILL EVENTUALLY BE CONVERTED TO A PERMANENT SCM DEVICE, THE BASIN MUST FUNCTION AS A TEMPORARY SEDIMENT BASIN AND MEET THE FOLLOWING PARAMETERS UNTIL COMPLETION OF THE PROJECT:
   - MAXIMUM DRAINAGE AREA: 100 ACRES
   - MINIMUM SEDIMENT STORAGE VOLUME: 1800 CUBIC FEET PER ACRE OF DISTURBED AREA
   - MINIMUM SURFACE AREA: 435 SQUARE FEET PER CFS OF Q_{10} PEAK INFLOW
   - MINIMUM DEWATERING TIME: 48 HOURS
2. CLEAR, GRUB, AND STRIP TOPSOIL FROM AREAS UNDER THE EMBANKMENT TO REMOVE TREES, VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL. DELAY CLEARING THE POOL AREA UNTIL THE DAM IS COMPLETE. STOCKPILE ALL TOPSOIL OR SOIL CONTAINING ORGANIC MATTER FOR USE ON THE OUTER SHELL OF THE EMBANKMENT TO FACILITATE VEGETATIVE ESTABLISHMENT.
3. PLACE TEMPORARY SEDIMENT CONTROL MEASURES BELOW THE BASIN AND STOCKPILE AS NEEDED.
4. EXCAVATE A CUT–OFF TRENCH ALONG THE CENTER LINE OF THE EARTH FILL EMBANKMENT. CUT TRENCH TO STABLE SOIL MATERIAL, BUT IN NO CASE MAKE IT LESS THAN 2 FEET DEEP WITH MAXIMUM SIDE SLOPES NO STEEPER THAN 1:1. COMPACTION REQUIREMENTS ARE THE SAME AS THOSE FOR THE EMBANKMENT.
5. EXTEND THE CUT–OFF TRENCH INTO BOTH ABUTMENTS TO AT LEAST THE ELEVATION OF THE RISER CREST.
6. KEEP THE TRENCH DRY DURING BACKFILLING AND COMPACTION OPERATIONS.
7. FILL MATERIAL SHOULD BE CLEAN MINERAL SOIL, FREE OF ROOTS, WOODY VEGETATION, ROCKS, AND OTHER OBJECTIONABLE MATERIAL. AREAS OF APPROVED FILL SHOULD BE SHOWN ON THE PLANS.
8. SCARIFY AREAS ON WHICH FILL IS TO BE PLACED PRIOR TO PLACING. ENSURE THAT FILL MATERIAL CONTAINS SUFFICIENT MOISTURE SO IT CAN BE FORMED BY HAND INTO A BALL WITHOUT CRUMBLING. IF WATER CAN BE SQUEEZED OUT OF THE BALL, IT IS TOO WET FOR PROPER COMPACTION.
9. PLACE FILL MATERIAL IN 6 TO 8 INCH CONTINUOUS LAYERS OVER THE ENTIRE LENGTH OF FILL AREA AND COMPACT.
10. CONSTRUCT THE EMBANKMENT TO AN ELEVATION 10% HIGHER THAN THE DESIGN HEIGHT TO ALLOW FOR SETTLING.
11. SECURELY ATTACH THE RISER TO THE BARREL OR BARREL STUB TO MAKE A WATERTIGHT STRUCTURAL CONNECTION. ALL CONNECTIONS SHOULD BE MADE USING APPROVED WATERTIGHT ASSEMBLIES.
12. IF NO RISER STRUCTURE IS TO BE USED, COUPLE THE SKIMMER ARM DIRECTLY INTO THE EMBANKMENT 1 FOOT FROM THE BOTTOM OF THE BASIN.
13. THE ARM PIPE CONNECTING THE SKIMMER TO THE RISER SHALL HAVE A MINIMUM LENGTH OF 6 FEET.
14. PLACE BARREL AND RISER ON A FIRM, SMOOTH FOUNDATION OF IMPERVIOUS SOIL.
15. DO NOT USE PERVIOUS MATERIAL SUCH AS SAND, GRAVEL, OR CRUSHED STONE AS BACKFILL AROUND THE PIPE OR ANTI–SEEP COLLARS.
16. PLACE FILL MATERIAL AROUND THE PIPE SPILLWAY IN 4–INCH LAYERS, AND COMPACT IT UNDER AND AROUND THE PIPE TO AT LEAST THE SAME DENSITY AS THE ADJACENT EMBANKMENT.
17. PLACE A MINIMUM DEPTH OF 2 FEET OF COMPACTED BACKFILL OVER THE PIPE SPILLWAY BEFORE CROSSING IT WITH ANY CONSTRUCTION EQUIPMENT.
18. ANCHOR RISER IN PLACE BY CONCRETE OR OTHER SATISFACTORY MEANS TO PREVENT FLOATATION.
19. IN NO CASE SHOULD THE PIPE CONDUIT BE INSTALLED BY CUTTING A TRENCH THROUGH THE DAM AFTER THE EMBANKMENT IS COMPLETE.
20. INSTALL THE EMERGENCY SPILLWAY IN UNDISTURBED SOIL.
21. DISCHARGE WATER INTO THE BASIN IN A MANNER TO PREVENT EROSION.
22. CONSTRUCT BASIN SO THAT THE DISTURBED AREA IS MINIMIZED, DIVERT SURFACE WATER FROM BARE AREAS AND COMPLETE THE EMBANKMENT BEFORE THE AREA IS CLEARED.
23. STABILIZE THE EMERGENCY SPILLWAY EMBANKMENT AND ALL OTHER DISTURBED AREA ABOVE THE CREST OF THE PRINCIPAL SPILLWAY IMMEDIATELY AFTER CONSTRUCTION.
24. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDE SLOPES.
25. INSTALL POROUS BAFFLES AS SPECIFIED BY THE ENGINEER

MAINTENANCE:

1. INSPECT ALL MEASURES AT LEAST WEEKLY AND AFTER EACH RAINFALL OF 1.0 INCH OR GREATER. MAKE ANY REPAIRS IMMEDIATELY.
2. REMOVE SEDIMENT AND RESTORE BASIN TO ITS ORIGINAL DIMENSIONS WHEN IT ACCUMULATES TO ONE–HALF THE DESIGN DEPTH.
3. PLACE REMOVED SEDIMENT IN AN AREA WITH SEDIMENT CONTROL MEASURES TO ENSURE NO LOSS OF SEDIMENT OFF–SITE.
4. CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT.
5. REMOVE ALL TRASH AND OTHER DEBRIS FORM THE RISER AND POOL AREA.

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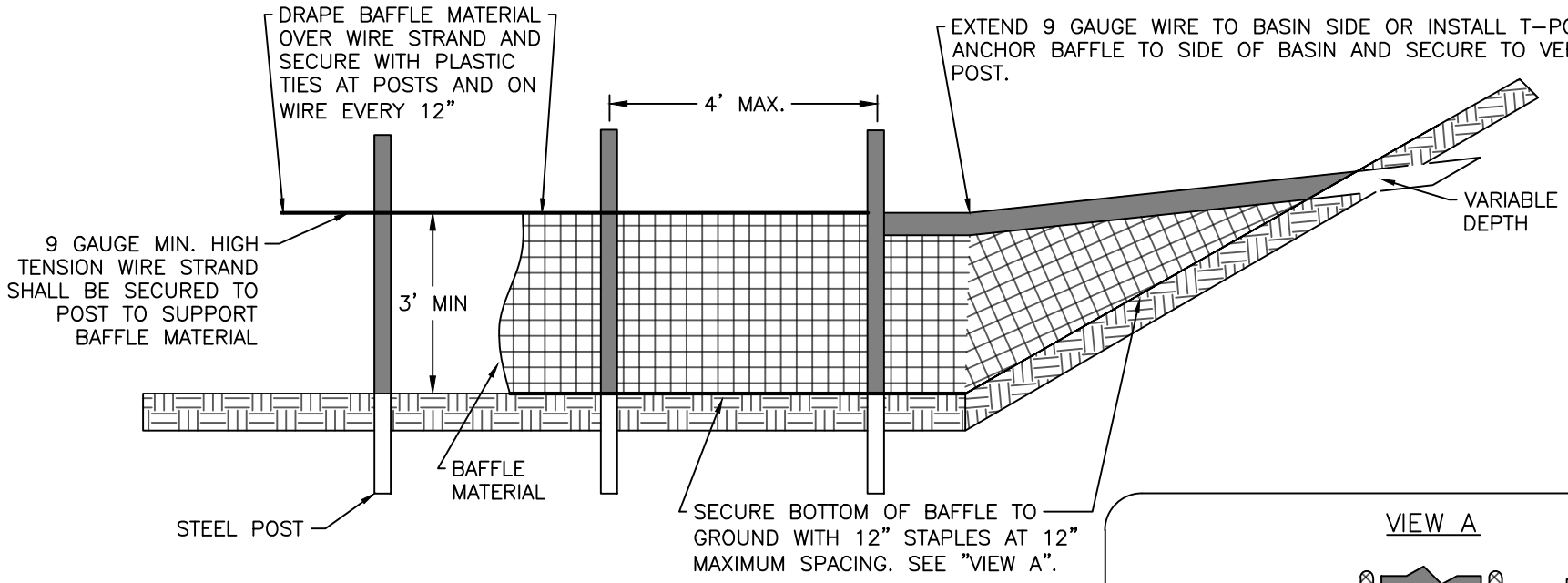
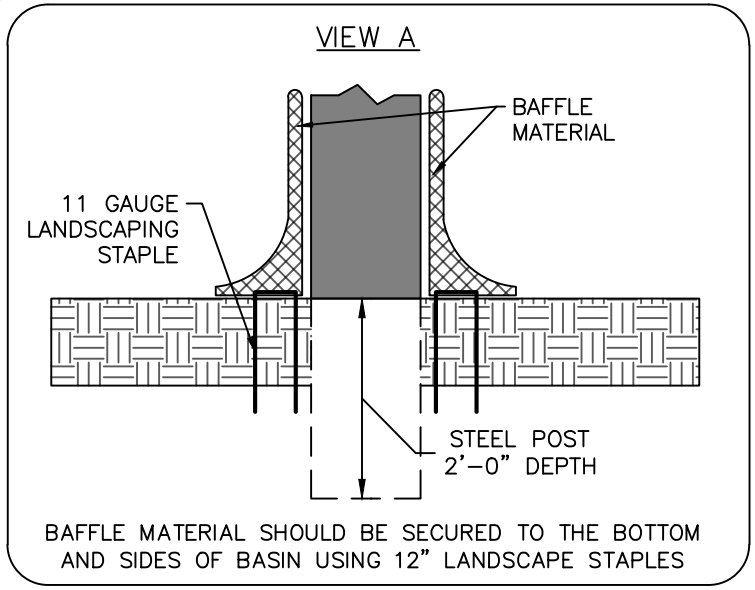
STANDARD RISER-BARREL SEDIMENT BASIN NOTES

EC-13.01





BAFFLE MATERIAL SHOULD BE SECURED TO THE BOTTOM AND SIDES OF BASIN USING 12" LANDSCAPE STAPLES

NOTES:

1. USE MATTING MADE OF 100% COCONUT FIBER (COIR) TWINE WOVEN INTO HIGH STRENGTH MATRIX.
2. STAPLES SHOULD BE MADE OF 0.125 INCH DIAMETER, NEW STEEL WIRE FORMED INTO A 'U' SHAPE NOT LESS THAN 12 INCHES IN LENGTH WITH A THROAT OF 1 INCH IN WIDTH. THE STAPLES ANCHOR THE POROUS BAFFLES INTO THE SIDES AND BOTTOM OF THE BASIN.
3. GRADE THE BASIN SO THAT THE BOTTOM IS LEVEL FRONT TO BACK AND SIDE TO SIDE.
4. INSTALL THE COIR FIBER BAFFLES IMMEDIATELY UPON EXCAVATION OF THE BASINS.
5. INSTALL POSTS ACROSS THE WIDTH OF THE SEDIMENT TRAP.
6. STEEL POSTS SHOULD BE DRIVEN TO A DEPTH OF 24 INCHES AND SPACED IN A MAXIMUM OF 4 FEET APART. THE TOP OF THE FABRIC SHOULD BE A MINIMUM OF 6 INCHES HIGHER THAN THE INVERT OF THE SPILLWAY. TOPS OF THE BAFFLES SHOULD BE A MINIMUM OF 2 INCHES LOWER THAN THE TOP OF THE EARTHEN EMBANKMENT.
7. INSTALL 3 COIR FIBER BAFFLES IN BASINS AT DRAINAGE OUTLETS WITH A SPACING OF 1/4 THE BASIN LENGTH. 2 COIR FIBER BAFFLES CAN BE INSTALLED IN THE BASINS LESS THAN 20 FEET IN LENGTH WITH A SPACING OF 1/3 THE BASIN LENGTH.
8. ATTACH A 9-GAUGE HIGH TENSION WIRE STRAND TO THE STEEL POSTS AT A HEIGHT OF 6 INCHES ABOVE THE SPILLWAY ELEVATION WITH PLASTIC TIES OR WIRE FASTENERS TO PREVENT SAGGING. IF THE TEMPORARY SEDIMENT BASIN WILL BE CONVERTED TO A PERMANENT STORMWATER BASIN OF A GREATER DEPTH, THE BAFFLE HEIGHT SHOULD BE BASED ON THE POOL DEPTH DURING USE AS A TEMPORARY SEDIMENT BASIN.

MAINTENANCE:

1. INSPECT ALL MEASURES AT LEAST WEEKLY AND AFTER EACH RAINFALL OF 1.0 INCH OR GREATER AND REPAIR IMMEDIATELY.
2. MAINTAIN ACCESS TO BAFFLES. IF THE FABRIC COLLAPSES, TEARS, DECOMPOSES, OR BECOMES INEFFECTIVE, REPLACE IMMEDIATELY.
3. REMOVE SEDIMENT DEPOSITS WHEN IT REACHES HALF FULL. REPLACE IF BAFFLE FABRIC IS DAMAGED DURING CLEAN-OUT OPERATIONS. SEDIMENT DEPTH SHOULD NEVER EXCEED HALF THE DESIGNED STORAGE DEPTH.

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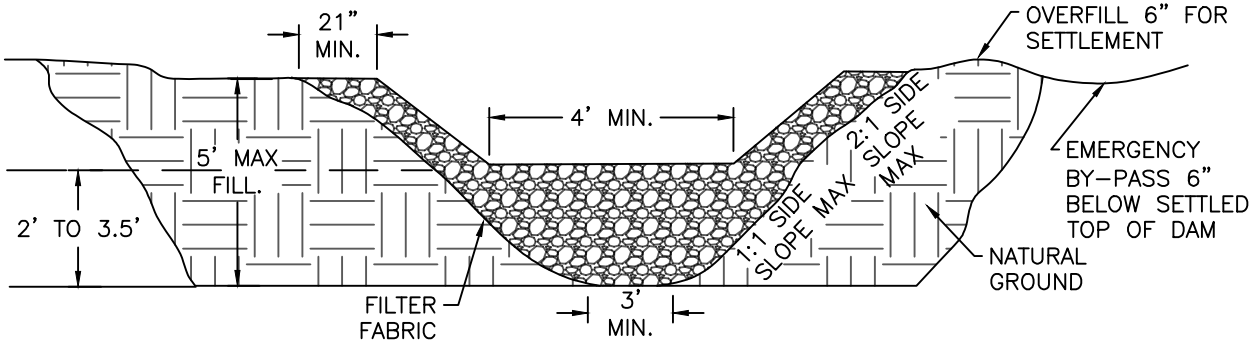
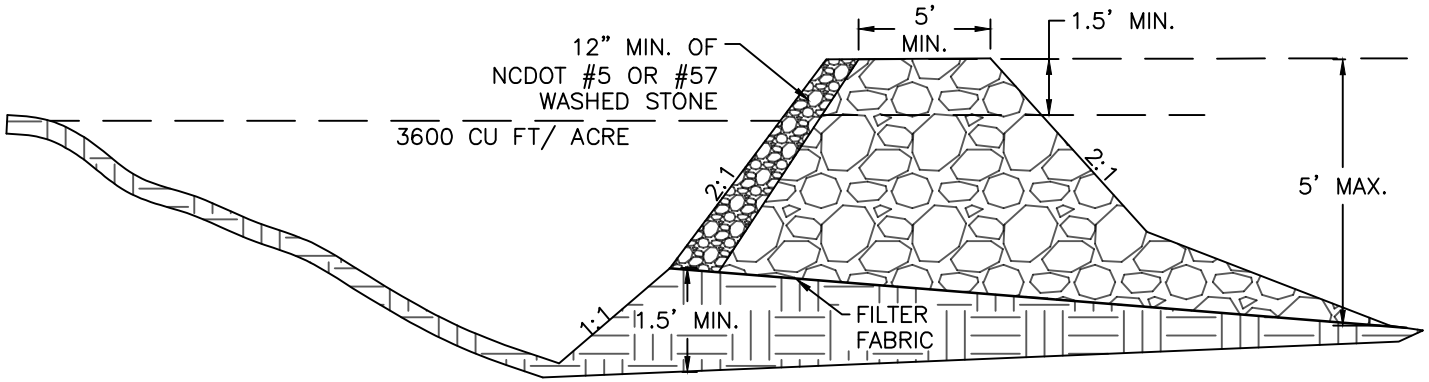
POROUS BAFFLES

EC-13.02



PLAN VIEW



CROSS-SECTION

MAINTENANCE:

1. INSPECT ALL MEASURES AT LEAST WEEKLY AND AFTER EACH RAINFALL OF 1.0 INCH OR GREATER.
2. REMOVE SEDIMENT AND RESTORE THE TRAP TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE DESIGN DEPTH OF THE TRAP.
3. PLACE THE SEDIMENT THAT IS REMOVED IN THE DESIGNATED DISPOSAL AREA, AND REPLACE THE PART OF THE GRAVEL FACING THAT IS IMPAIRED BY SEDIMENT.
4. CHECK THE STRUCTURE FOR DAMAGE FROM EROSION OR PIPING. PERIODICALLY CHECK THE DEPTH OF THE SPILLWAY TO ENSURE IT IS A MINIMUM OF 1.5 FEET BELOW THE LOW POINT OF THE EMBANKMENT. IMMEDIATELY FILL ANY SETTLEMENT OF THE EMBANKMENT TO SLIGHTLY ABOVE DESIGN GRADE.
5. ANY RIPRAP DISPLACED FROM THE SPILLWAY MUST BE REPLACED IMMEDIATELY.
6. AFTER ALL SEDIMENT-PRODUCING AREAS HAVE BEEN PERMANENTLY STABILIZED, REMOVE THE STRUCTURE AND ALL UNSTABLE SEDIMENT. SMOOTH THE AREA TO BLEND AND STABILIZE PROPERLY.

Spillway Design	
Drainage Area (acres)	Weir Length (ft)*
1	4
2	6
3	8
4	10
5	12
*Dimensions shown are minimums.	

NOTES:

1. CLEAR, GRUB, AND STRIP THE AREA UNDER THE EMBANKMENT OF ALL VEGETATION AND ROOT MAT. REMOVE ALL SURFACE SOIL CONTAINING HIGH AMOUNTS OF ORGANIC MATTER. HAUL ALL OBJECTIONABLE MATERIAL TO THE DESIGNATED DISPOSAL AREA.
2. ENSURE THAT FILL MATERIAL IS FREE OF ROOTS, WOODY VEGETATION, ORGANIC MATERIAL AND OTHER OBJECTIONABLE MATERIAL. PLACE FILL IN LIFTS NOT EXCEEDING 9 INCHES, AND MACHINE COMPACT. OVERFILL THE EMBANKMENT 6 INCHES TO ALLOW FOR SETTLEMENT.
3. CLEAR THE POND AREA BELOW THE ELEVATION OF THE CREST OF THE SPILLWAY TO FACILITATE SEDIMENT CLEANOUT.
4. ALL CUT AND FILL SLOPES SHOULD BE 2:1 OR FLATTER.
5. ENSURE THE STONE SECTION OF THE EMBANKMENT HAS A 3 FOOT MINIMUM, BOTTOM WIDTH AND MAXIMUM SIDE SLOPES OF 1:1 THAT EXTEND TO THE BOTTOM OF THE SPILLWAY SECTION.
6. THE WEIR MUST BE LEVEL AND CONSTRUCTED TO GRADE TO ASSURE DESIGN CAPACITY.
7. DISCHARGE INLET WATER IN A MANNER TO PREVENT EROSION, USING TEMPORARY SLOPE DRAINS OR DIVERSIONS WITH OUTLET PROTECTION TO DIVERT SEDIMENT-LADEN WATER TO THE UPPER END OF THE POOL AREA TO IMPROVE BASIN TRAP EFFICIENCY.
8. ENSURE THE STONE SPILLWAY OUTLET SECTION EXTENDS DOWNSTREAM PAST THE TOE OF THE EMBANKMENT UNTIL STABLE CONDITIONS ARE REACHED AND THE OUTLET VELOCITY IS ACCEPTABLE FOR THE RECEIVING STREAM. KEEP THE EDGES OF THE STONE OUTLET SECTION FLUSH WITH THE SURROUNDING GROUND, AND SHAPE THE CENTER TO CONFINE THE OUTFLOW STREAM.
9. PLACE EMERGENCY SPILLWAY IN UNDISTURBED SOILS AND DIRECT EMERGENCY BYPASS TO NATURAL, STABLE AREAS. LOCATE BYPASS OUTLETS SO THAT FLOW WILL NOT DAMAGE THE EMBANKMENT.
10. STABILIZE THE EMBANKMENT AND ALL DISTURBED AREAS ABOVE THE SEDIMENT POOL AND BARE SOIL DOWNSTREAM FROM THE TRAP IMMEDIATELY AFTER CONSTRUCTION.
11. SHOW THE DISTANCE FROM THE TOP OF THE SPILLWAY TO THE SEDIMENT CLEANOUT LEVEL(1/2 DESIGN DEPTH) ON THE PLANS AND INDICATE IN THE FIELD.
12. INSTALL POROUS BAFFLES AS SPECIFIED ON FOLLOWING SHEETS.
13. IF TRAP IS TO BE DE-WATERED USING A PUMP AND SILT BAG, SHOW LOCATION ON PLANS.

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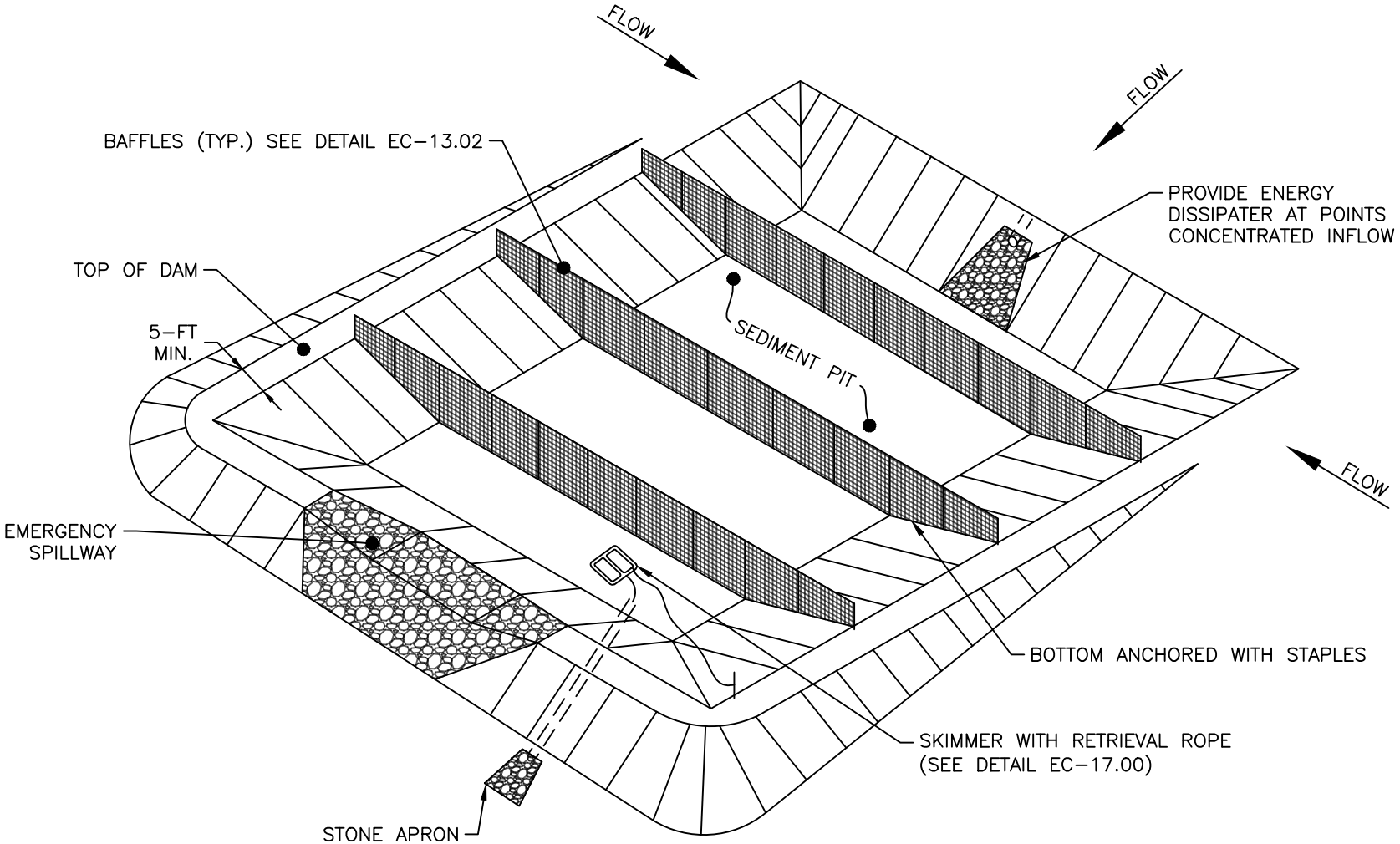
TEMPORARY SEDIMENT TRAP

EC-13.03



PERSPECTIVE VIEW

NOTES:

1. DRIVE STEEL FENCE POST AT LEAST 18 INCHES INTO SOLID GROUND
2. WOOD POSTS ARE NOT ACCEPTABLE
3. DIRECT WATER TO TOP OF BASIN
4. SEE DETAIL EC-14.02 FOR REQUIRED MAINTENANCE AND CONSTRUCTION NOTES

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STANDARD TEMPORARY SKIMMER BASIN

EC-14.01

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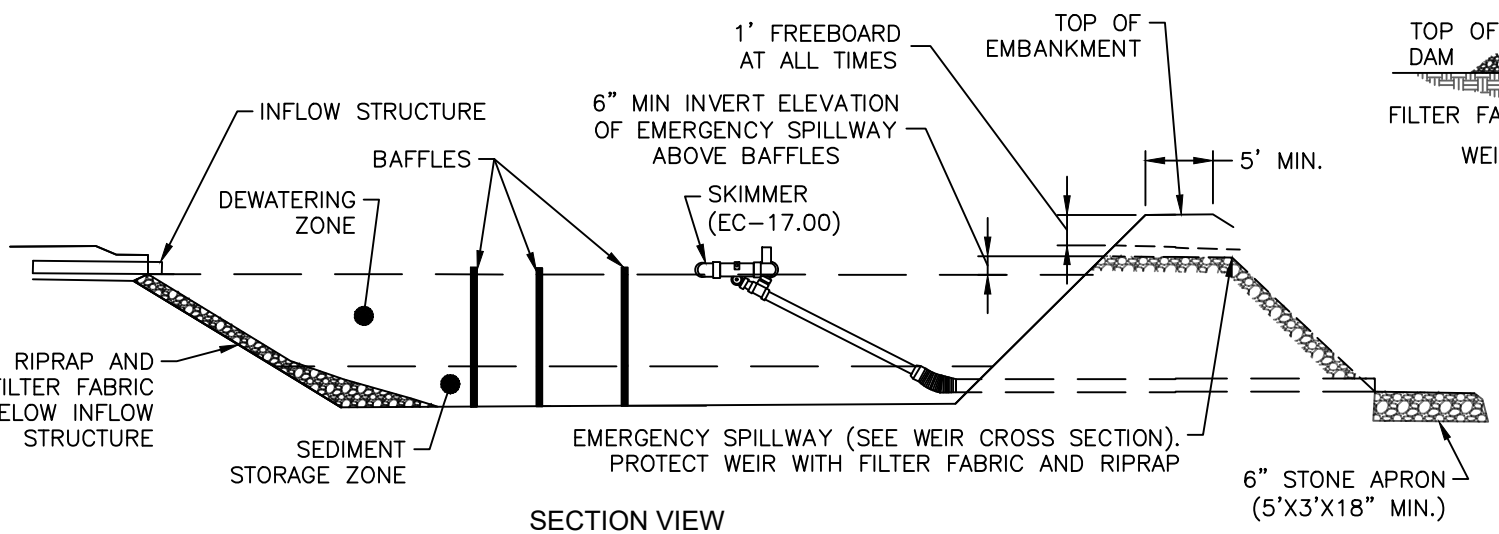
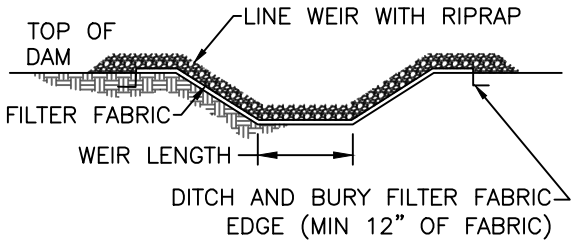


SECTION VIEW



WEIR CROSS SECTION

DESIGN OF SPILLWAYS

DRAINAGE AREA (ACRES)	WEIR LENGTH (FT) [1]
1	4.0
2	6.0
3	8.0
4	10.0
5	12.0

[1] DIMENSIONS SHOWN ARE MINIMUM

CONSTRUCTION NOTES:

1. CLEAR, GRUB AND STRIP THE AREA UNDER THE EMBANKMENT OF ALL VEGETATION AND ROOT MAT. REMOVE ALL SURFACE SOIL CONTAINING HIGH AMOUNTS OF ORGANIC MATTER AND STOCKPILE OR DISPOSE OF IT PROPERLY. HAUL ALL OBJECTIONABLE MATERIAL TO THE DESIGNATED DISPOSAL AREA. PLACE TEMPORARY SEDIMENT CONTROL MEASURES BELOW BASIN AS NEEDED.
2. PLACE THE FILL IN LIFTS NOT TO EXCEED 9 INCHES, AND MACHINE COMPACT IT. OVER FILL THE EMBANKMENT 6 INCHES TO ALLOW FOR SETTLEMENT.
3. PLACE THE BARREL ON A FIRM, SMOOTH FOUNDATION OF IMPERVIOUS SOIL. DO NOT USE PERVIOUS MATERIAL SUCH AS SAND, GRAVEL, OR CRUSHED STONE AS BACKFILL AROUND THE PIPE. PLACE THE FILL AROUND THE PIPE SPILLWAY IN 4-INCH LAYERS AND COMPACT IT UNDER AND AROUND THE PIPE TO AT LEAST THE SAME DENSITY AS THE ADJACENT EMBANKMENT.
4. PLACE A MINIMUM DEPTH OF 2 FEET COMPACTED BACKFILL OVER THE PIPE SPILLWAY BEFORE CROSSING WITH CONSTRUCTION EQUIPMENT.
5. ENSURE THAT THE FLOW LENGTH TO BASIN WIDTH RATIO IS AT LEAST 2:1 TO IMPROVE TRAPPING EFFICIENCY. LENGTH IS MEASURED AT THE ELEVATION OF THE PRINCIPAL SPILLWAY.
6. ASSEMBLE THE SKIMMER FOLLOWING MANUFACTURERS INSTRUCTIONS OR AS DESIGNED AND LAY ON THE BOTTOM OF THE BASIN WITH THE FLEXIBLE JOINT AT THE INLET OF THE BARREL PIPE. ATTACH THE FLEXIBLE JOINT TO THE BARREL PIPE AND POSITION THE SKIMMER OVER THE EXCAVATED PIT OR SUPPORT. BE SURE TO ATTACH A ROPE AND ANCHOR IT TO THE SIDE OF THE BASIN.THIS WILL BE USED TO PULL THE SKIMMER TO THE SIDE FOR MAINTENANCE.
7. INSTALL THE SPILLWAY IN UNDISTURBED SOIL TO THE GREATEST EXTENT POSSIBLE. THE SPILLWAY SHOULD BE LINED WITH LAMINATED PLASTIC OR IMPERMEABLE GEOTEXTILE FABRIC. THE FABRIC MUST BE WIDE AND LONG ENOUGH TO COVER THE BOTTOM AND SIDES AND EXTEND ONTO THE TOP OF THE DAM FOR ANCHORING IN A TRENCH. THE EDGES MAY BE SECURED WITH 8-INCH STAPLES OR PINS.
8. FILTER FABRIC MUST BE LONG ENOUGH TO EXTEND DOWN THE SLOPE AND EXIT ONTO STABLE GROUND. THE WIDTH OF THE FABRIC MUST BE ONE PIECE, NOT JOINED OR SPLICED; OTHERWISE WATER CAN GET UNDER THE FABRIC.
9. THE UPPER SECTION(S) SHOULD OVERLAP THE LOWER SECTION(S) SO THAT WATER CANNOT FLOW UNDER THE FABRIC. SECURE THE UPPER EDGE AND SIDES OF THE FABRIC IN A TRENCH WITH STAPLES OR PINS.
10. DISCHARGE WATER INTO THE BASIN IN A MANNER TO PREVENT EROSION. USE TEMPORARY SLOPE DRAINS OR DIVERSIONS WITH OUTLET PROTECTION TO DIVERT SEDIMENT-LADEN WATER TO THE UPPER END OF THE POOL AREA TO IMPROVE BASIN TRAP EFFICIENCY.
11. STABILIZE THE EMERGENCY SPILLWAY EMBANKMENT AND ALL OTHER DISTURBED AREAS ABOVE THE CREST OF THE PRINCIPAL SPILLWAY IMMEDIATELY AFTER CONSTRUCTION.

GENERAL NOTES.

1. USE FOR DRAINAGE AREAS NOT EXCEEDING 5 ACRES
2. EARTH BERM SHALL BE STABILIZED WITH SEEDING ACCORDING TO TOWN SPECIFICATIONS

" NOT TO SCALE "

MAINTENANCE:

1. INSPECT ALL MEASURES AT LEAST WEEKLY AND AFTER EACH RAINFALL OF 1.0 INCH OR GREATER. MAKE NECESSARY REPAIRS IMMEDIATELY.
2. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE-HALF THE HEIGHT OF THE FIRST BAFFLE. PULL THE SKIMMER TO ONE SIDE SO THAT THE SEDIMENT UNDERNEATH CAN BE EXCAVATED. EXCAVATE THE SEDIMENT FROM THE ENTIRE BASIN, NOT JUST AROUND THE SKIMMER OR WITHIN THE FIRST CELL.
3. MAKE SURE ANY VEGETATION GROWING IN THE BOTTOM OF THE BASIN DOES NOT HOLD DOWN THE SKIMMER.
4. REPAIR BAFFLES IF THEY ARE DAMAGED. RE-ANCHOR THE BAFFLES IF WATER IS FLOWING UNDERNEATH OR AROUND THEM.
5. ENSURE THE SKIMMER IS NOT CLOGGED WITH TRASH OR DEBRIS.
6. IF THE SKIMMER ARM OR BARREL PIPE IS CLOGGED, REMOVE ORIFICE AND CLEAR DEBRIS WITH A PLUMBER'S SNAKE OR BY FLUSHING WITH CLEAN WATER. BE SURE TO REPLACE THE ORIFICE BEFORE REPOSITIONING THE SKIMMER.
7. CHECK FABRIC LINED SPILLWAY FOR DAMAGE AND MAKE ANY REQUIRED REPAIRS WITH FABRIC THAT SPANS THE FULL WIDTH OF THE SPILLWAY. CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT.

TOWN OF CHAPEL HILL

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TEMPORARY SKIMMER BASIN

EC-14.02

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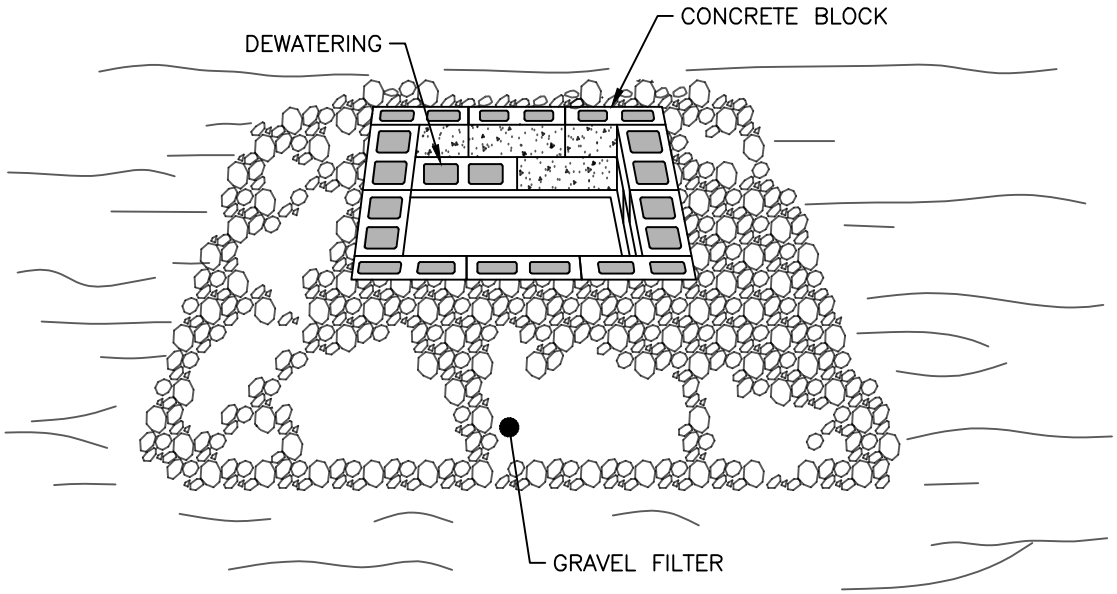
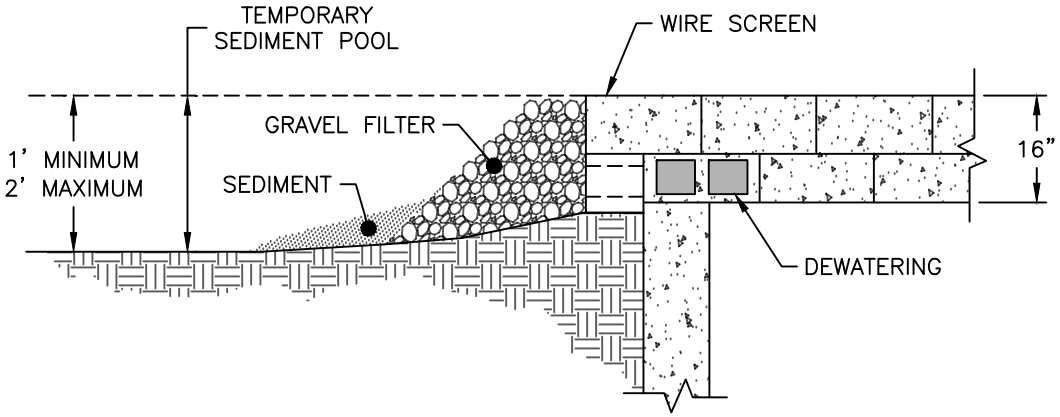
CONSTRUCTION SPECIFICATIONS

1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE IN THE BOTTOM ROW TO ALLOW POOL DRAINAGE. THE FOUNDATION SHOULD BE EXCAVATED AT LEAST 2 INCHES BELOW THE CREST OF THE STORM DRAIN. PLACE THE BOTTOM ROW OF BLOCKS AGAINST THE EDGE OF THE STORM DRAIN FOR LATERAL SUPPORT AND TO AVOID WASHOUTS WHEN OVERFLOW OCCURS. IF NEEDED, GIVE LATERAL SUPPORT TO SUBSEQUENT ROWS BY PLACING 2X4 WOOD STUDS THROUGH BLOCK OPENINGS.

2. CAREFULLY FIT HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH $\frac{1}{2}$–IN OPENINGS OVER ALL BLOCK OPENINGS TO HOLD GRAVEL IN PLACE.

3. USE CLEAN GRAVEL, $\frac{3}{4}$ TO $\frac{1}{2}$ INCH IN DIAMETER, PLACED 2 INCHES BELOW THE TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER AND SMOOTH IT TO AN EVEN GRADE. DOT #57 WASHED STONE IS RECOMMENDED.





MAINTENANCE:

1. INSPECT ALL MEASURES AT LEAST WEEKLY AND AFTER EVERY RAINFALL OF 1.0 INCH OR GREATER; REPAIR IMMEDIATELY.

2. REMOVE SEDIMENT AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR SUBSEQUENT RAINS.

3. WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN ADEQUATELY STABILIZED, REMOVE ALL MATERIALS AND ANY UNSTABLE SOIL, AND EITHER SALVAGE OR DISPOSE OF IT PROPERLY. BRING THE DISTURBED AREA TO PROPER GRADE, THEN SMOOTH AND COMPACT BEFORE STABILIZING.

" NOT TO SCALE "

TOWN OF CHAPEL HILL

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TOWN OF CHAPEL HILL
STANDARD DETAIL

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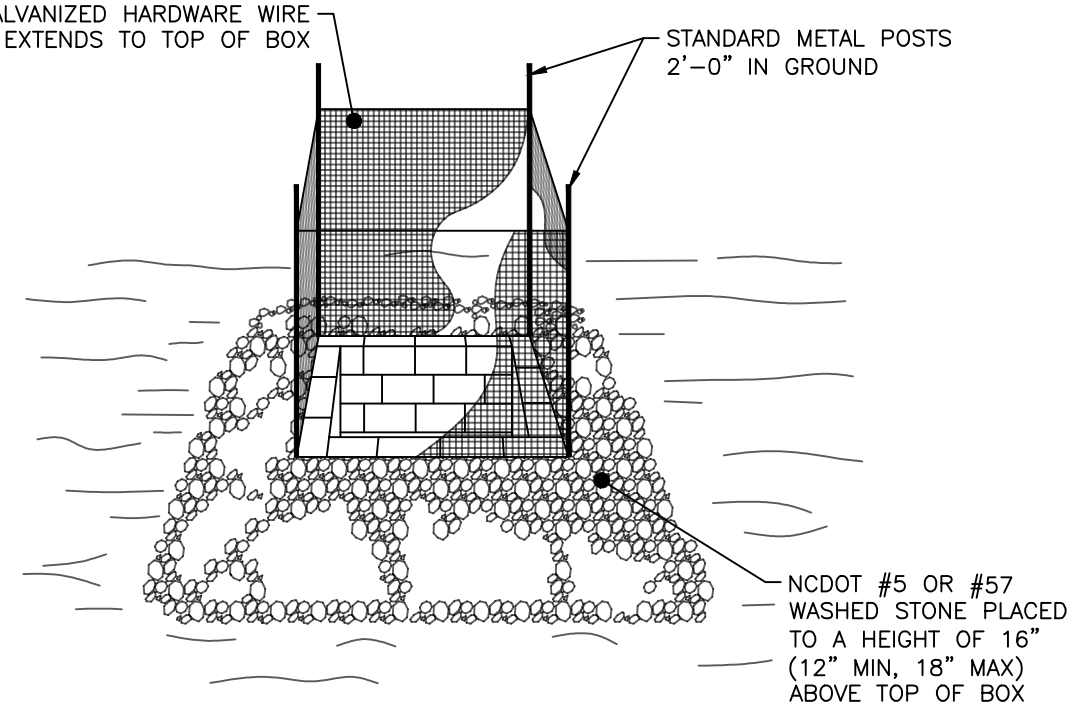
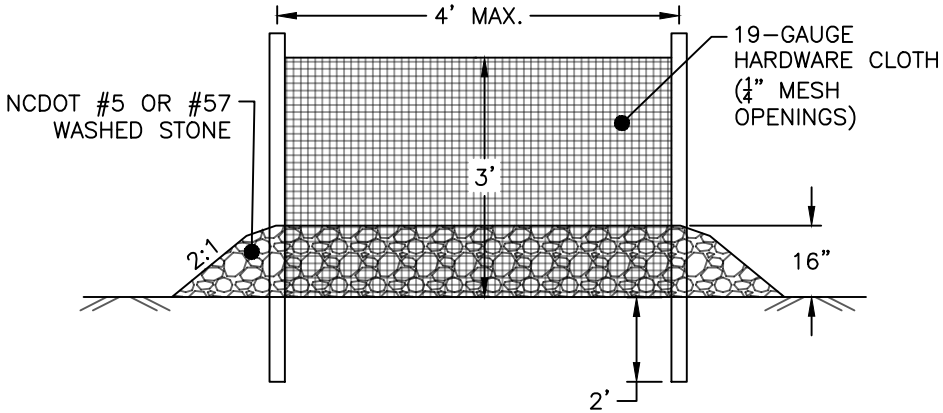
STANDARD BLOCK & GRAVEL DROP INLET PROTECTION

EC-15.00



ISOMETRIC VIEW



PROFILE VIEW

" NOT TO SCALE "

NOTES:

1. UNIFORMLY GRADE A SHALLOW DEPRESSION APPROACHING THE INLET
2. DRIVE 5–FT STEEL POSTS EVENLY AROUND THE PERIMETER OF THE INLET, MAXIMUM OF 4–FT APART
3. SURROUND THE POST WITH WIRE MESH HARDWARE CLOTH, SECURING THE WIRE MESH TO STEEL POSTS AT THE TOP, MIDDLE, AND BOTTOM. PLACING A 2–FT FLAP OF THE WIRE MESH UNDER THE GRAVEL FOR ANCHORING IS RECOMMENDED.
4. PLACE CLEAN GRAVEL ON A 2:1 SLOPE WITH A HEIGHT OF 16–IN AROUND THE WIRE AND SMOOTH TO AN EVEN GRADE.

MAINTENANCE:

1. INSPECT ALL MEASURES AT LEAST WEEKLY AND AFTER EVERY RAINFALL OF 1.0 INCH OR GREATER; REPAIR IMMEDIATELY.
2. REMOVE SEDIMENT AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR SUBSEQUENT RAINS.
3. REPLENISH STONE AS NEEDED. REPAIR OR REPLACE HARDWARE CLOTH IF TORN/ DAMAGED.
4. WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN ADEQUATELY STABILIZED, REMOVE ALL MATERIALS AND ANY UNSTABLE SOIL, AND EITHER SALVAGE OR DISPOSE OF IT PROPERLY. BRING THE DISTURBED AREA TO PROPER GRADE, THEN SMOOTH AND COMPACT BEFORE STABILIZING.

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STANDARD CATCH BASIN/ YARD INLET PROTECTION

EC-16.00

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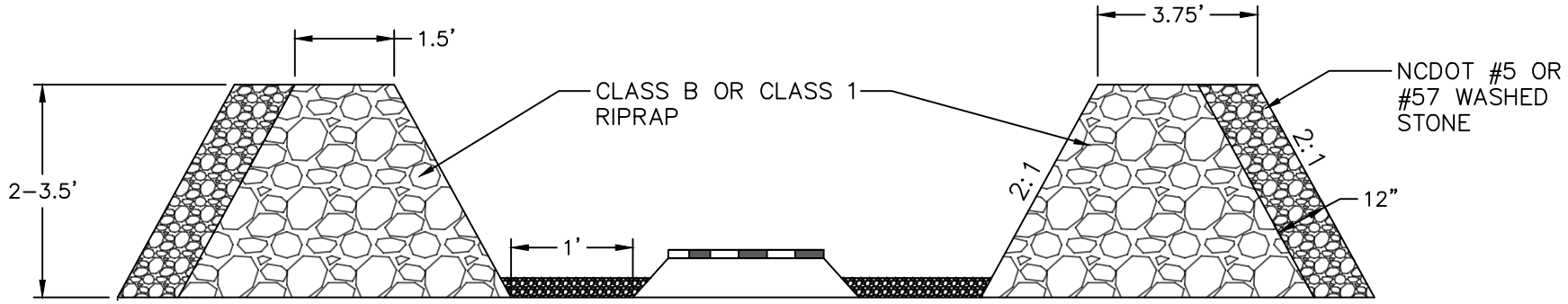
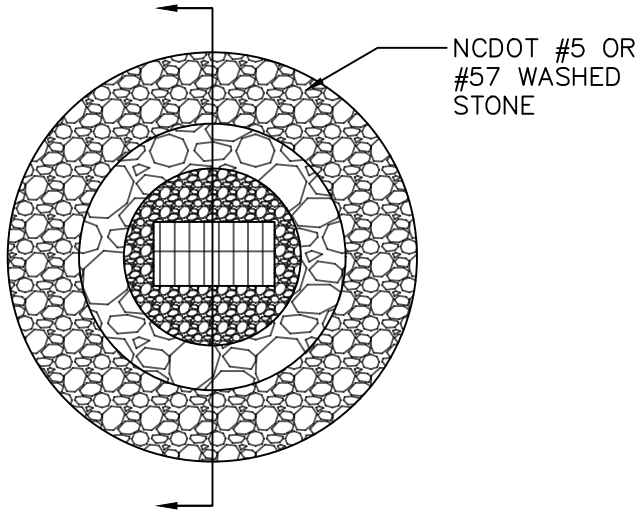


SECTION VIEW



PLAN VIEW

NOTES:

1. CLEAR THE AREA OF ALL DEBRIS THAT MIGHT HINDER EXCAVATION AND DISPOSAL OF SPOIL.
2. GRADE SHALLOW DEPRESSION UNIFORMLY TOWARDS THE INLET WITH SIDE SLOPES NO GREATER THAN 2:1. GRADE A 1–FOOT WIDE LEVEL AREA SET 4 INCHES BELOW THE AREA ADJACENT TO THE INLET.
3. INSTALL THE CLASS B OR CLASS 1 RIPRAP IN A CIRCLE AROUND THE INLET. THE MINIMUM CREST WIDTH OF THE RIPRAP SHOULD BE 18 INCHES, WITH A MINIMUM BOTTOM WIDTH OF 7.5 FEET. THE MINIMUM HEIGHT OF THE STONE IS 2 FEET.
4. THE OUTSIDE FACE OF THE RIPRAP IS THEN LINED WITH 12 INCHES OF NC DOT #5 OR #57 WASHED STONE.

MAINTENANCE:

1. INSPECT ALL MEASURES AT LEAST WEEKLY AND AFTER EACH RAINFALL OF 1.0 INCH OR GREATER; MAKE ANY REPAIRS IMMEDIATELY.
2. REMOVE SEDIMENT FORM THE SEDIMENT POOL AREA WHEN THE VOLUME IS DECREASED BY HALF. STABILIZE EXCAVATED MATERIAL APPROPRIATELY.
3. DO NOT DAMAGE OR UNDERCUT THE STRUCTURE DURING SEDIMENT REMOVAL. REMOVE DEBRIS AND REPLACE STONE AS NEEDED. IF INLET IS COVERED WITH WIRE MESH, CLEAN WIRE MESH FREE OF DEBRIS.

" NOT TO SCALE "

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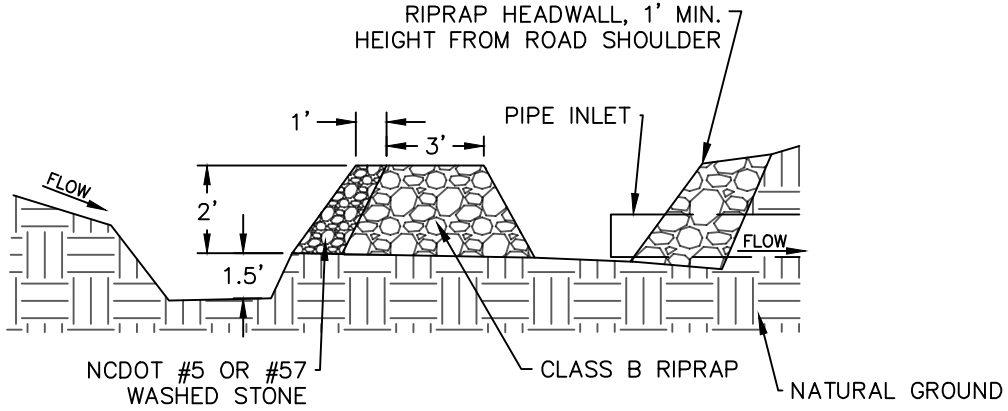
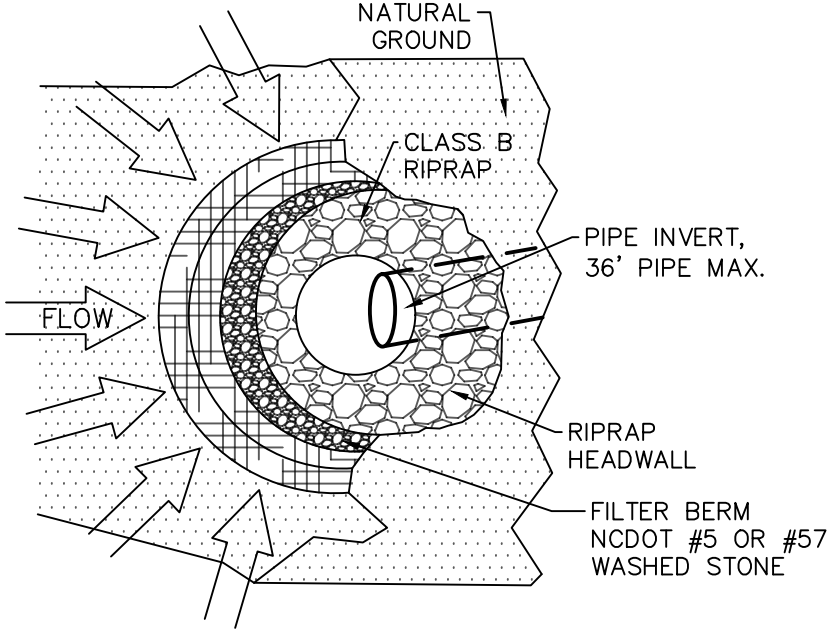
ROCK DOUGHNUT INLET PROTECTION

EC-16.01



SECTION VIEW



PLAN VIEW

" NOT TO SCALE "

NOTES:

1. CLEAR THE AREA OF ALL DEBRIS THAT MIGHT HINDER EXCAVATION AND DISPOSAL OF SPOIL.
2. INSTALL THE CLASS B OR CLASS 1 RIPRAP IN A SEMI-CIRCLE AROUND THE PIPE INLET. THE STONE SHOULD BE BUILT UP HIGHER ON EACH END WHERE IT TIES INTO THE EMBANKMENT. THE MINIMUM CREST WIDTH OF THE RIPRAP SHOULD BE 3 FEET, WITH A MINIMUM BOTTOM WIDTH OF 11 FEET. THE MINIMUM HEIGHT SHOULD BE 2 FEET, BUT ALSO 1 FOOT LOWER THAN THE EMBANKMENT OF DIVERSIONS.
3. A 1 FOOT THICK LAYER OF NC DOT #5 OR #57 STONE SHOULD BE PLACED ON THE OUTSIDE SLOPE OF THE RIPRAP.
4. THE SEDIMENT STORAGE AREA SHOULD BE EXCAVATED AROUND THE OUTSIDE OF THE STONE HORSESHOE 18 INCHES BELOW NATURAL GRADE.
5. WHEN CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE THE PIPE AND ROCK, FILL DEPRESSION, ESTABLISH FINAL GRADING ELEVATIONS, COMPACT THE AREA PROPERLY, AND STABILIZE WITH GROUND COVER.

MAINTENANCE:

1. INSPECT ALL MEASURES AT LEAST WEEKLY AND AFTER EACH RAINFALL OF 1.0 INCH OR GREATER AND REPAIR IMMEDIATELY.
2. REMOVE SEDIMENT AND RESTORE THE SEDIMENT STORAGE AREA TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE DESIGN DEPTH OF THE TRAP.
3. PLACE THE SEDIMENT THAT IS REMOVED IN THE DESIGNATED DISPOSAL AREA AND REPLACE THE CONTAMINATED PART OF THE GRAVEL FACING.
4. CHECK THE STRUCTURE FOR DAMAGE. ANY RIPRAP DISPLACED FROM THE STONE HORSESHOE MUST BE REPLACED IMMEDIATELY.
5. AFTER ALL THE SEDIMENT-PRODUCING AREAS HAVE BEEN PERMANENTLY STABILIZED, REMOVE THE STRUCTURE AND ALL THE UNSTABLE SEDIMENT. SMOOTH THE AREA TO BLEND WITH THE ADJOINING AREAS AND PROVIDE PERMANENT GROUND COVER.

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STANDARD DETAIL

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ROCK PIPE INLET PROTECTION

EC-16.02

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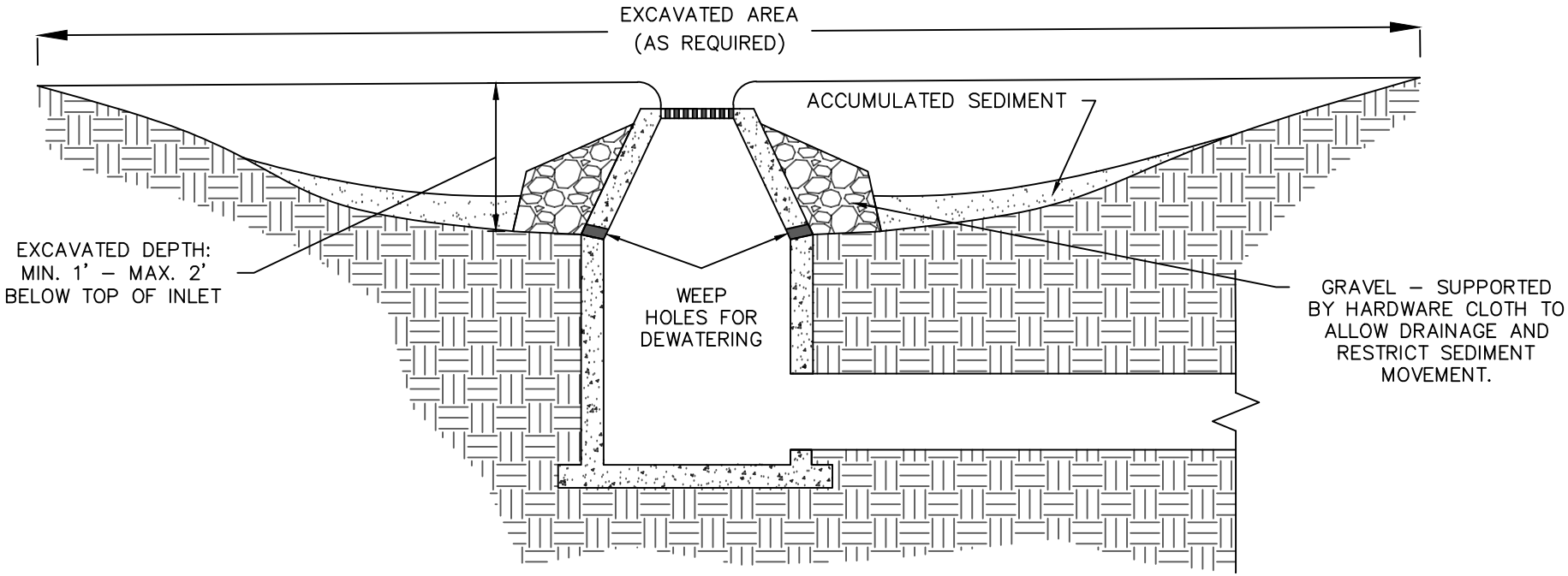

MAINTENANCE:

1. INSPECT ALL MEASURES AT LEAST WEEKLY AND AFTER EACH RAINFALL OF 1.0 INCH OR GREATER.
2. CLEAN, AND PROPERLY MAINTAIN THE EXCAVATED BASIN AFTER EVERY STORM UNTIL THE CONTRIBUTING DRAINAGE AREA HAS BEEN PERMANENTLY STABILIZED.
3. REMOVE SEDIMENT WHEN THE VOLUME OF THE BASIN HAS BEEN REDUCED BY ONE–HALF.
4. SPREAD ALL EXCAVATED MATERIAL EVENLY OVER THE SURROUNDING LAND AREA OR STOCKPILE AND STABILIZE APPROPRIATELY.

NOTES:

1. CLEAR THE AREA OF ALL DEBRIS THAT MIGHT HINDER EXCAVATION AND DISPOSAL OF SPOIL.
2. GRADE THE APPROACH TO THE INLET UNIFORMLY.
3. PROTECT WEEP HOLES BY GRAVEL.
4. WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN PERMANENTLY STABILIZED, SEAL WEEP HOLES, FILL THE BASIN WITH STABLE SOIL TO FINAL GRADING ELEVATIONS, COMPACT IT PROPERLY AND STABILIZE.

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TOWN OF CHAPEL HILL
STANDARD DETAIL

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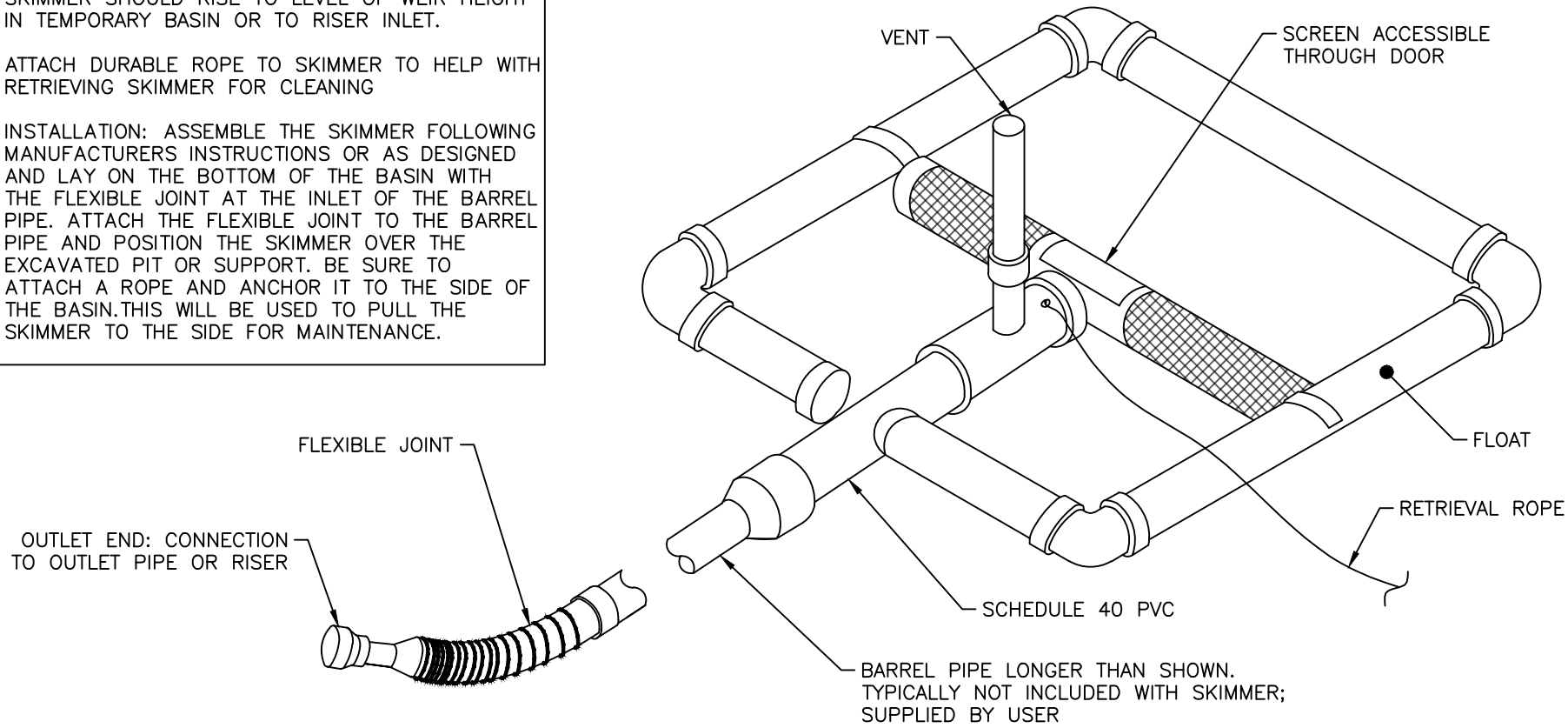
EXCAVATED DROP INLET PROTECTION

EC-16.03

NOTES:

1. SKIMMER IS TO BE USED AS SURFACE DEWATERING DEVICE FOR TEMPORARY SEDIMENT BASIN OR OTHER APPROVED BMPS.
2. SKIMMER SHOULD RISE TO LEVEL OF WEIR HEIGHT IN TEMPORARY BASIN OR TO RISER INLET.
3. ATTACH DURABLE ROPE TO SKIMMER TO HELP WITH RETRIEVING SKIMMER FOR CLEANING
4. INSTALLATION: ASSEMBLE THE SKIMMER FOLLOWING MANUFACTURERS INSTRUCTIONS OR AS DESIGNED AND LAY ON THE BOTTOM OF THE BASIN WITH THE FLEXIBLE JOINT AT THE INLET OF THE BARREL PIPE. ATTACH THE FLEXIBLE JOINT TO THE BARREL PIPE AND POSITION THE SKIMMER OVER THE EXCAVATED PIT OR SUPPORT. BE SURE TO ATTACH A ROPE AND ANCHOR IT TO THE SIDE OF THE BASIN.THIS WILL BE USED TO PULL THE SKIMMER TO THE SIDE FOR MAINTENANCE.



MAINTENANCE:

1. INSPECT SKIMMER AT LEAST WEEKLY AND AFTER EACH RAINFALL OF 1.0 INCH OR GREATER. MAKE NECESSARY REPAIRS IMMEDIATELY.
2. MAKE SURE ANY VEGETATION GROWING IN THE BOTTOM OF THE BASIN DOES NOT HOLD DOWN THE SKIMMER.
3. ENSURE THE SKIMMER IS NOT CLOGGED WITH TRASH OR DEBRIS.
4. IF THE SKIMMER ARM OR BARREL PIPE IS CLOGGED, REMOVE ORIFICE AND CLEAR DEBRIS WITH A PLUMBER'S SNAKE OR BY FLUSHING WITH CLEAN WATER. BE SURE TO REPLACE THE ORIFICE BEFORE REPOSITIONING THE SKIMMER.

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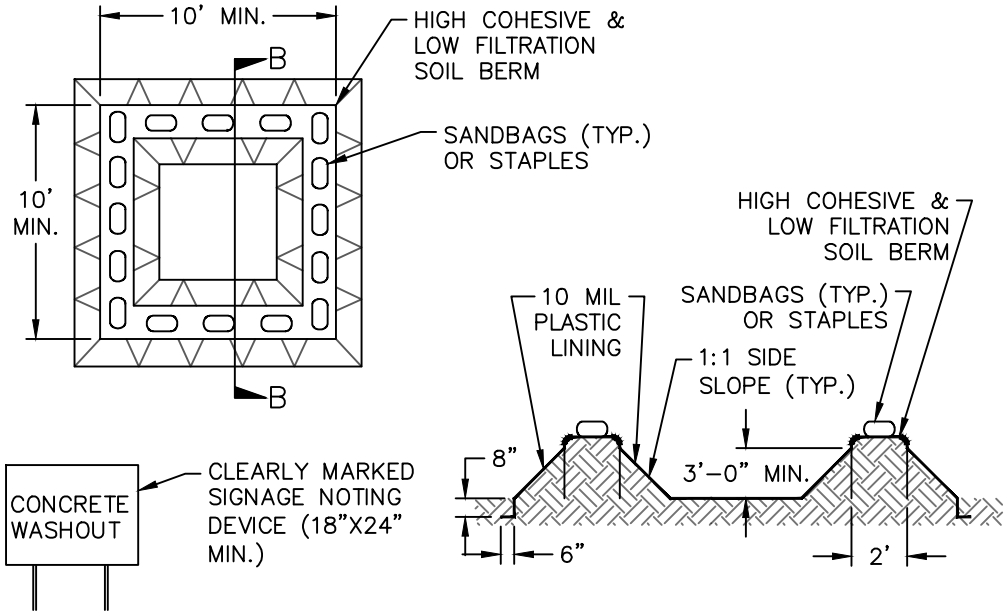
STANDARD SKIMMER DETAIL

EC-17.00



PLAN

SECTION B–B

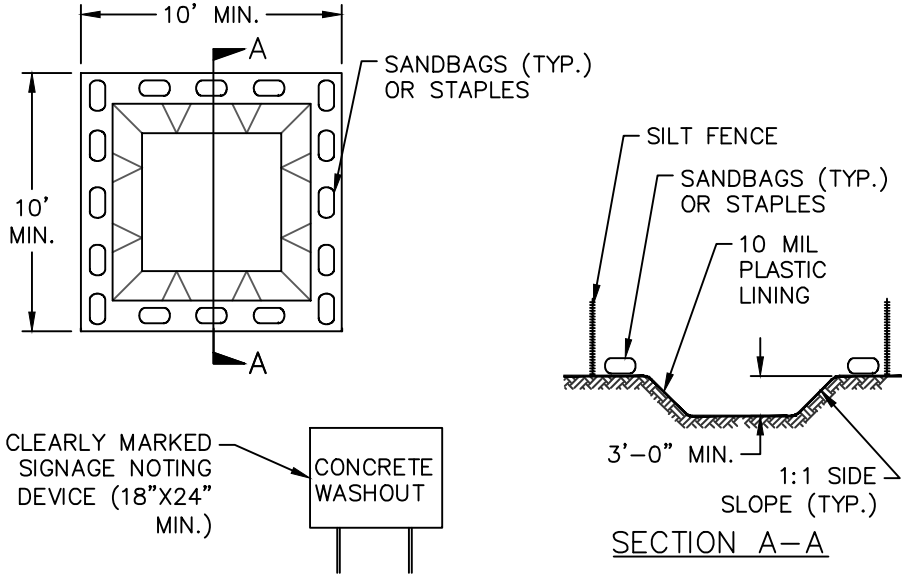
NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD. WASHOUT SHALL NOT BE INSTALLED WITHIN 50–FT OF A STORMWATER INLET, OPEN CHANNEL, WATER BODY OR WETLAND.

2. LOCATE WASHOUTS IN AN EASILY ACCESIBLE AREA, ON LEVEL GROUND AND INSTALL A STONE ENTRANCE PAD IN FRONT OF THE WASHOUT

3. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.

4. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.

ABOVE GRADE WASHOUT STRUCTURE



PLAN

SECTION A–A

NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD. WASHOUT SHALL NOT BE INSTALLED WITHIN 50–FT OF A STORMWATER INLET, OPEN CHANNEL, WATER BODY OR WETLAND.

2. LOCATE WASHOUTS IN AN EASILY ACCESIBLE AREA, ON LEVEL GROUND AND INSTALL A STONE ENTRANCE PAD IN FRONT OF THE WASHOUT

3. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY.

4. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.

BELOW GRADE WASHOUT STRUCTURE

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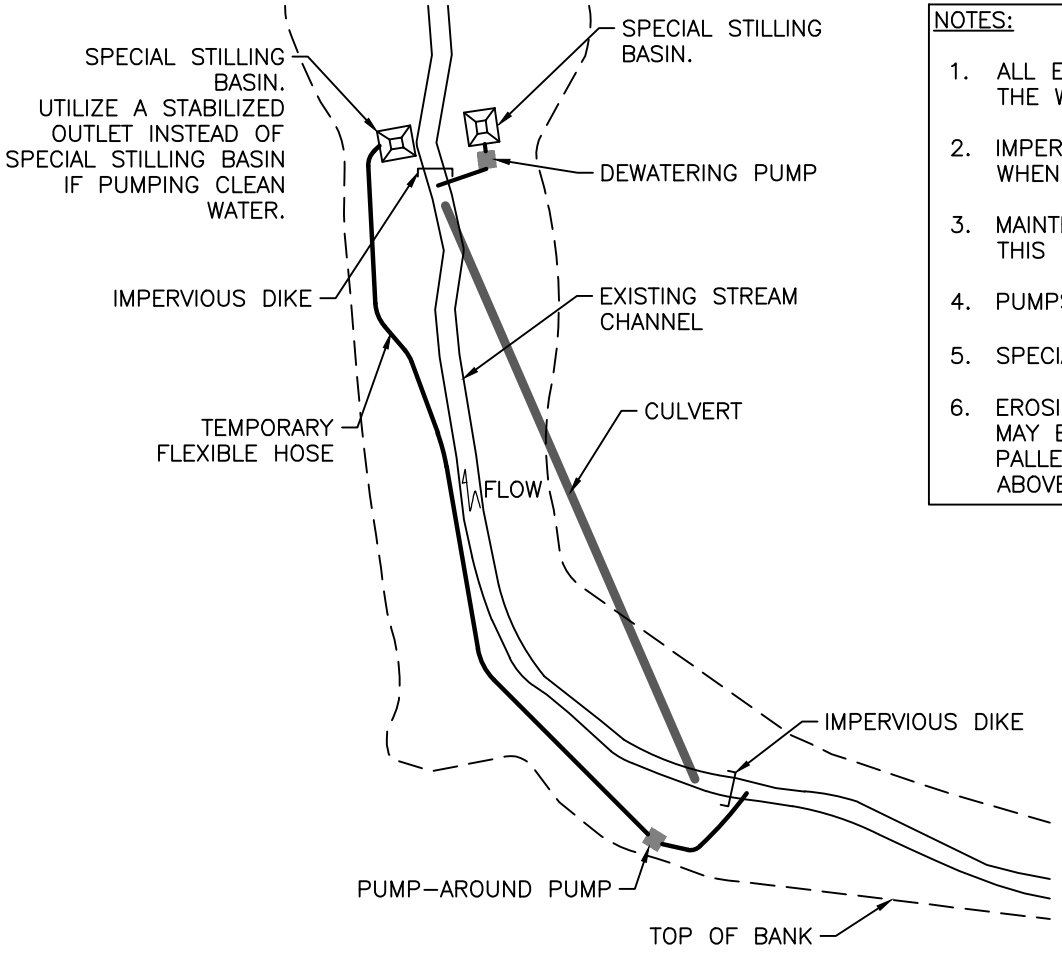
CONCRETE WASHOUT STRUCTURE WITH LINER

DATE: 03/2024

EC-18.00



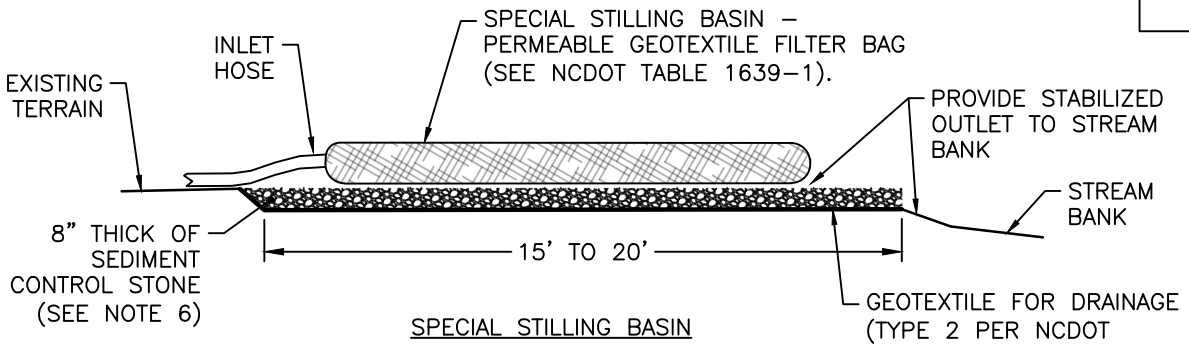
PUMP-AROUND PLAN

NOTES:

1. ALL EXCAVATION SHALL BE PERFORMED IN ONLY DRY OR ISOLATED AREAS OF THE WORK ZONE.
2. IMPERVIOUS DIKES ARE TO BE USED TO ISOLATE WORK FROM STREAM FLOW WHEN NECESSARY.
3. MAINTENANCE OF STREAM FLOW OPERATIONS SHALL BE INCIDENTAL TO THE WORK. THIS INCLUDES POLYETHYLENE SHEETING, DIVERSION PIPES, PUMPS AND HOSES.
4. PUMPS AND HOSES SHALL BE OF SUFFICIENT SIZE TO DEWATER THE WORK AREA.
5. SPECIAL STILLING BASIN(S) SHALL BE PER NCDOT STANDARD SPECIFICATION 1639
6. EROSION CONTROL STONE SHALL BE NO. 5 OR NO. 57 STONE. WOOD PALLETS MAY BE USED IN LIEU OF STONE AS DIRECTED – A SUFFICIENT NUMBER OF PALLETS MUST BE PROVIDED TO ELEVATE THE ENTIRE SPECIAL STILL BASIN ABOVE NATURAL GROUND.

SEQUENCE OF CONSTRUCTION FOR TYPICAL WORK AREA:

1. INSTALL SPECIAL STILLING BASIN(S).
2. INSTALL UPSTREAM PUMP AND TEMPORARY FLEXIBLE HOSE
3. PLACE UPSTREAM IMPERVIOUS DIKE AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION.
4. PLACE UPSTREAM IMPERVIOUS DIKE AND PUMPING APPARATUS. DEWATER ENTRAPPED AREA. AREA TO BE DEWATERED SHALL BE EQUAL TO ONE DAY'S WORK.
5. INSTALL CULVERT(S) IN ACCORDANCE WITH THE PLANS.
6. EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES. REMOVE IMPERVIOUS DIKES (DOWNSTREAM DIKE FIRST), PUMPS AND TEMPORARY FLEXIBLE HOSE.
7. REMOVE SPECIAL STILLING BASIN(S) AND BACKFILL, STABILIZE DISTURBED AREA WITH SEED AND MULCH.



SPECIAL STILLING BASIN

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TEMPORARY STREAM DIVERSION (PUMP-AROUND)

EC-19.00

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NFPA 220

- **TYPES OF CONSTRUCTION DEFINED BY THE FIRE RESISTANCE RATING (IN HOURS) OF THE TYPE I THRU V**

- TYPE I, FIRE RESISTIVE: CONSISTS OF PRECAST CONCRETE SLABS SUPPORT BY PRECAST COLUMNS AND PRECAST GIRDERS.
- TYPE II, NONCOMBUSTIBLE: THE WEIGHT BEARERS ARE GENERALLY STEEL BEAMS AND GIRDERS. IF THE BUILDING IS TYPE II (000), THE BEAMS AND GIRDERS ARE ALL "UNPROTECTED" STEEL.
- TYPE III, ORDINARY: CAN CONSIST OF A MIX MATERIALS, INCLUDING WOOD AND CONCRETE.
- TYPE IV, HEAVY TIMBER: CONSTRUCTION USING HEAVY TIMBER. TO QUALIFY AS HEAVY TIMBER, A WOOD MEMBER MUST MEET A CERTAIN THICKNESS REQUIREMENTS.
- TYPE V, WOOD FRAME: ALL-WOOD CONSTRUCTION.

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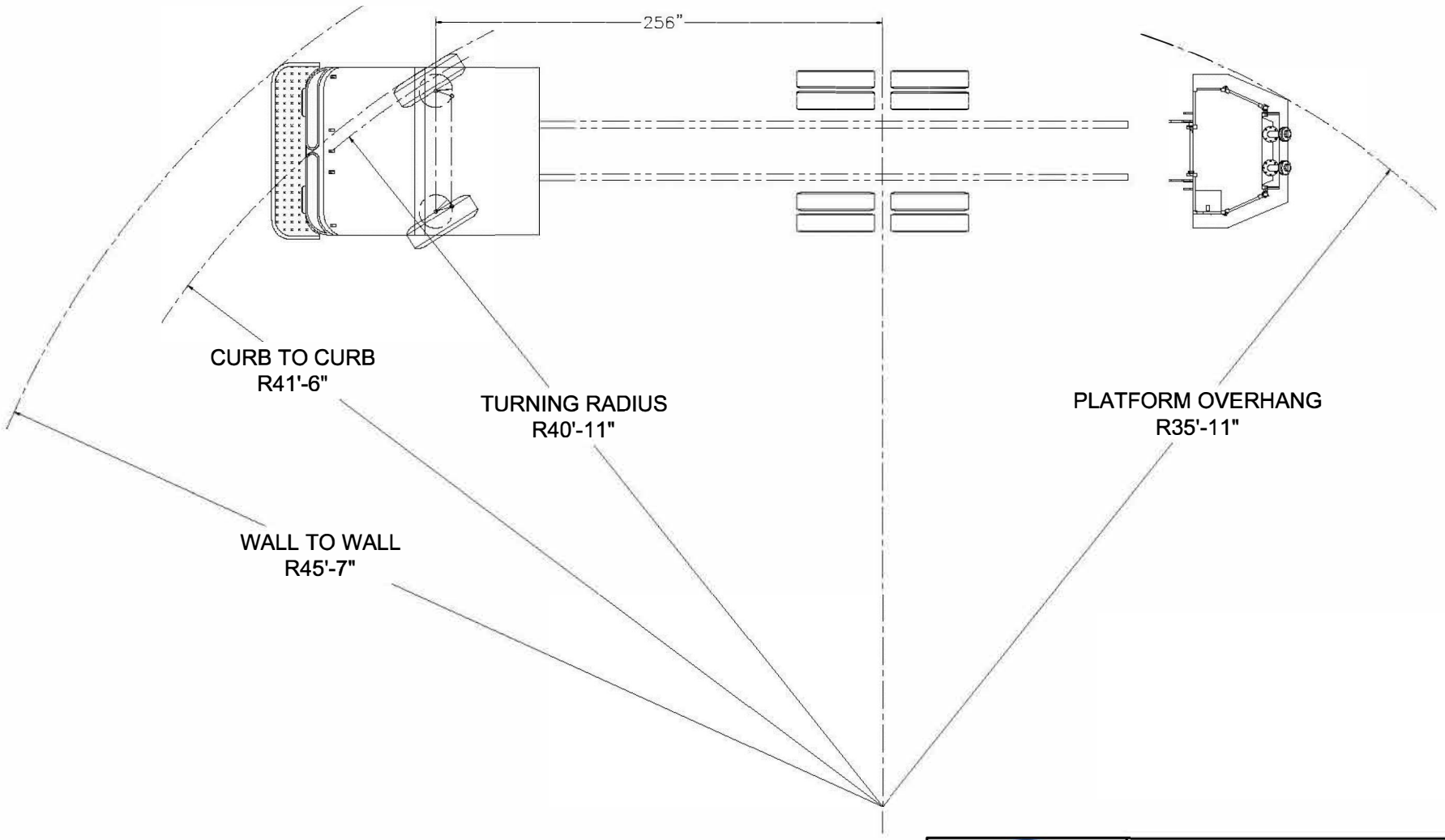
NFPA 220 RATING

F-1.00



NOTE:

1. **THESE ARE APPROXIMATE DIMENSION THAT DO NOT TAKE AFFECT THE WEIGHT OF THE VEHICLE OR THE SURFACE THE VEHICLE IS ON.**

" N O T T O S C A L E "

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MID MOUNT TANDEM AXLE 256" WHEELBASE

F-2.00

These improvements shall be constructed in accordance with the following drawings and with the Standards Specifications of the Town of Chapel Hill.

I, _____,PE, certify that the Standards Specifications of the Town of Chapel Hill have been thoroughly checked and found to be applicable to this project. All exceptions to the applicable standards have been previously approved by the Town of Chapel Hill and said exceptions are shown on Sheet(s)_____ of these drawings.

By:_____, PE

SEAL

Date:_____

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TOWN OF CHAPEL HILL

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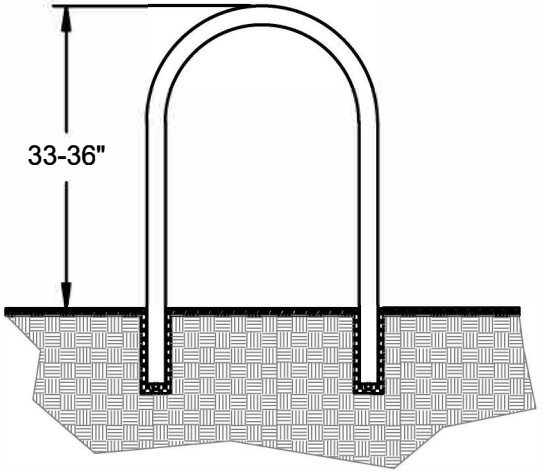
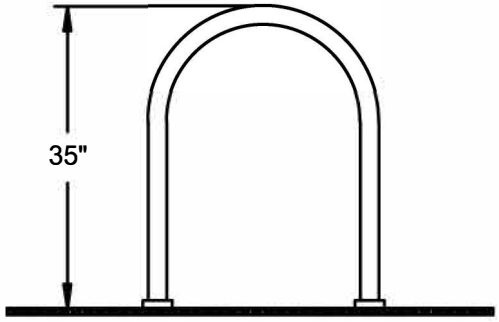
TOWN OF CHAPEL HILL CERTIFICATION

N-1.00

IN-GROUND MOUNT



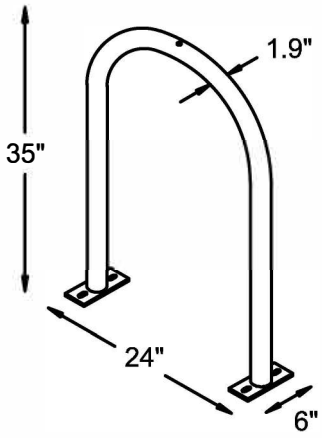
SURFACE MOUNT



BIKE RACK INSTALLATION:

SURFACE MOUNT - WHEN INSTALLED ON CONCRETE SURFACE, USE 3/8" ANCHORS TO PLATE MOUNT. SHIM AS NECESSARY TO ENSURE VERTICAL PLACEMENT.

IN-GROUND MOUNT - WHEN INSTALLED ON PAVERS OR OTHER NON-STABLE SURFACES, EMBED INTO BASE. CORE HOLES NO LESS THAN 3" IN DIAMETER AND 10" DEEP.



STANDARD BIKE RACK

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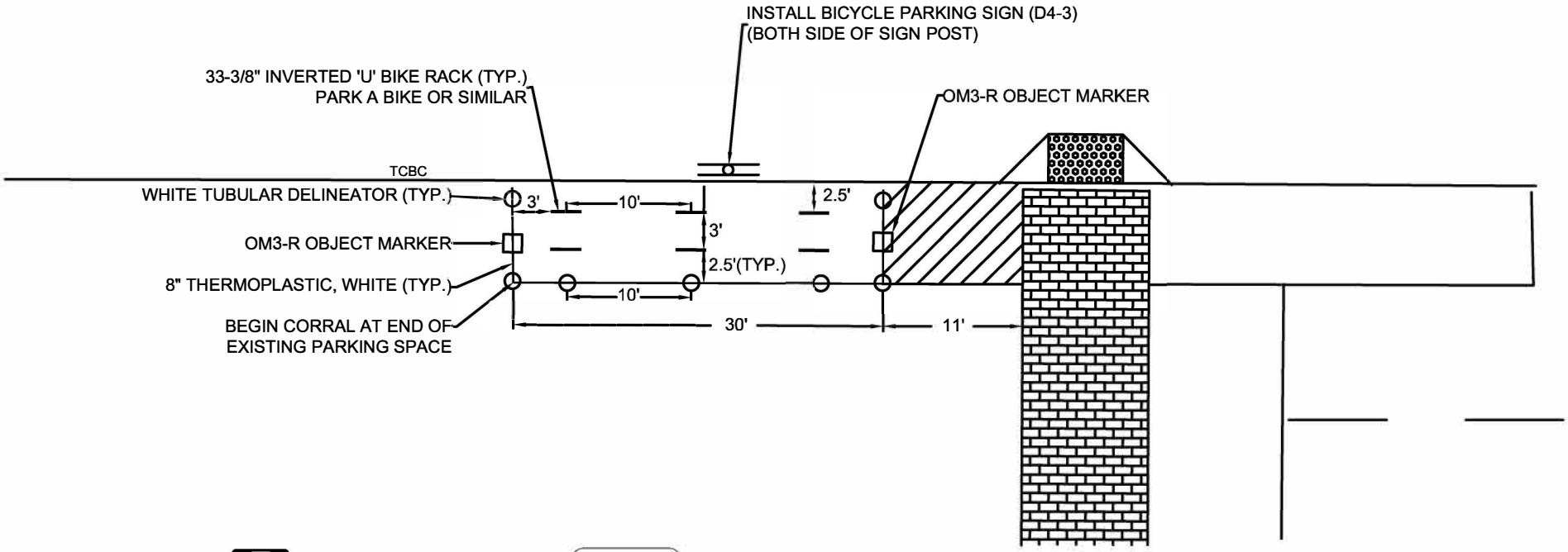
BIKE RACK DETAIL

PR-1.00



OM3-R
COLOR SCHEME: BLACK ON YELLOW

D4-3
COLOR SCHEME: GREEN ON WHITE

"NOT TO SCALE"

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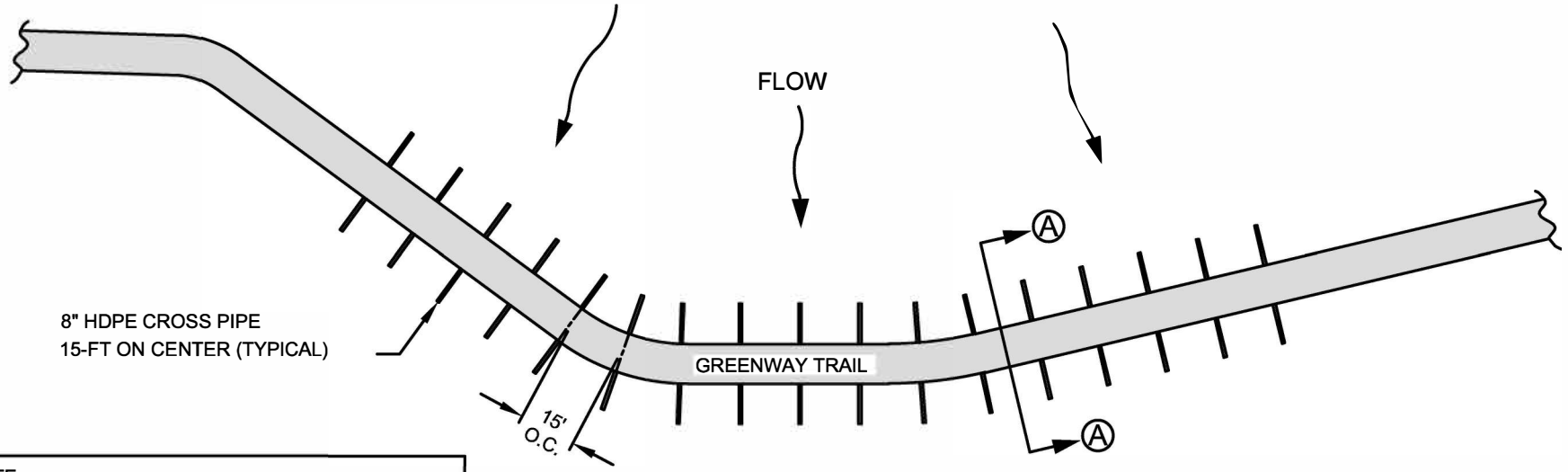
BIKE STAGING

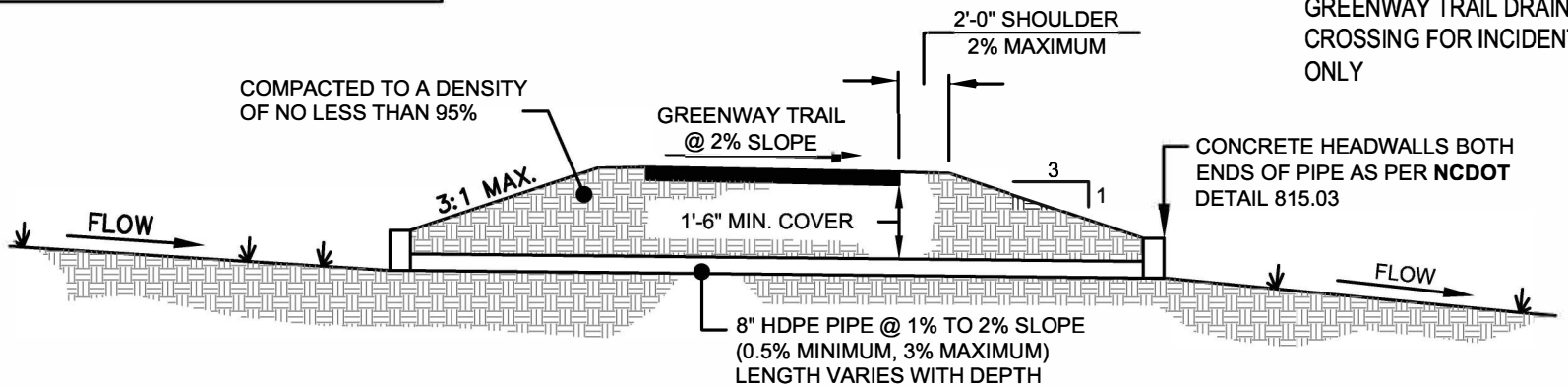
PR-2.00



PLAN VIEW

NOTE:
TO BE USED ONLY ON A CASE-BY-CASE BASIS AS APPROVED BY THE TOWN OF CARY TRANSPORTATION & FACILITIES DEPARTMENT.

GREENWAY TRAIL DRAINAGE CROSSING FOR INCIDENTAL DRAINAGE ONLY



CROSS SECTION "A-A"

" N O T T O S C A L E "

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STANDARD DETAI L

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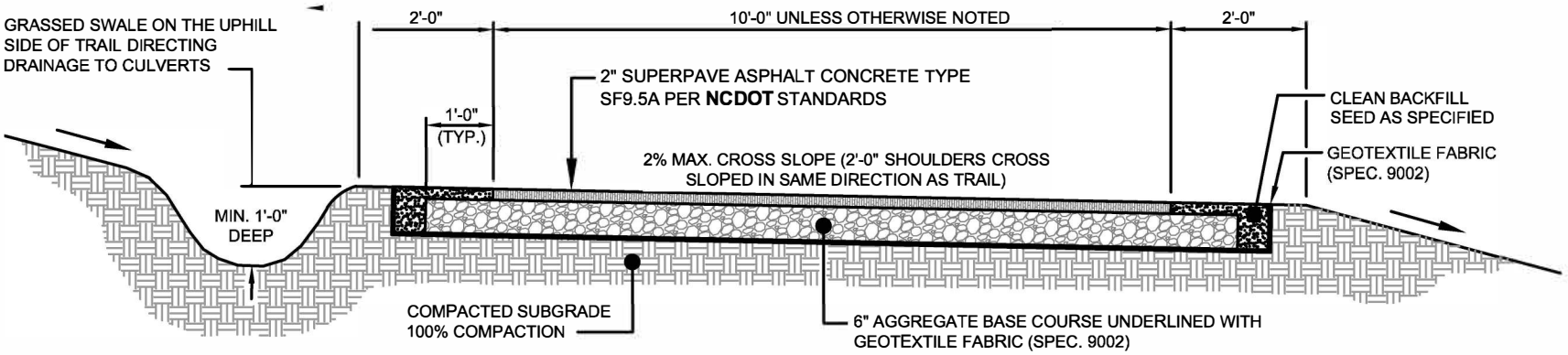
GREENWAY TRAIL DRAINAGE CROSSING FOR INCIDENTAL DRAINAGE ONLY

DATE: 02/2017

PR-3.00



NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR RE-ESTABLISHING ALL SLOPES DISTURBED BY CONSTRUCTION.
2. NO ABOVE GROUND UTILITIES OR UTILITY SURFACE COVERS/PLATES/MANHOLES SHALL BE LOCATED WITHIN TRAIL AND SHALL BE MINIMUM 2 FEET FROM THE EDGE OF TRAIL. RAISED MANHOLES SHALL BE MINIMUM 4 FEET FROM TRAIL EDGE.
3. ALL TRAILS SHALL BE LOCATED MINIMUM 5 FEET FROM THE BACK OF CURB.
4. SIDE SLOPES SHALL NOT EXCEED 3:1. CUT & FILL SLOPES SHALL TIE INTO EXISTING SLOPES TO CREATE AN EVEN TRANSITION.
5. CROSS SLOPE TYPICALLY TO LOW SIDE BUT CROSS SLOPE TO INSIDE OF DOWNHILL CURVES, WITH GRADUAL TRANSITIONS BETWEEN ANY CROSS SLOPE DIRECTION CHANGES.
6. PLACE SAWCUT CONTRACTION JOINTS 10' O.C. PERPENDICULAR OF TRAIL.
7. PLACE DOWELED EXPANSION JOINTS 10' O.C. PERPENDICULAR OF TRAIL.

"NOT TO SCALE"

TOWN OF CHAPEL HILL

DATE: 02/2017

TOWN OF CHAPEL HILL
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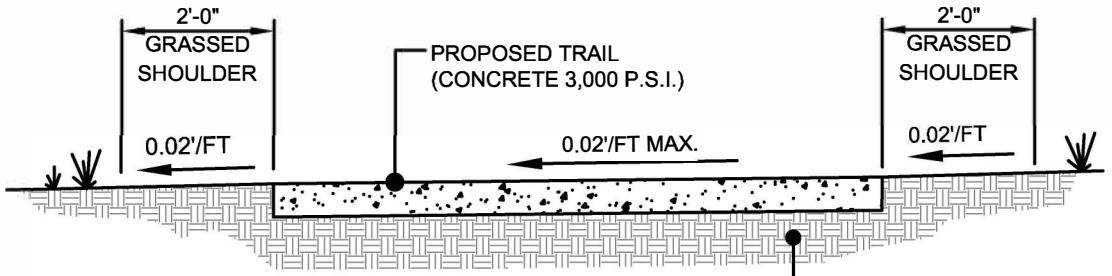
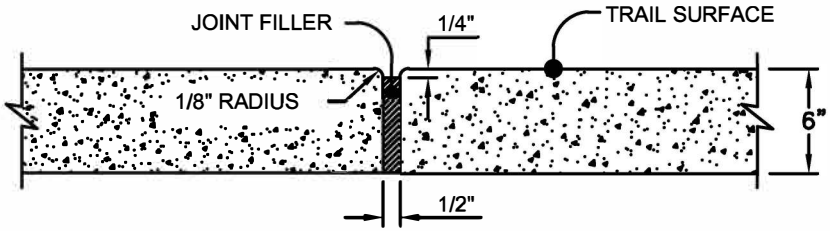
STANDARD 10-FT ASPHALT GREENWAY TRAIL

PR-4.00



TYPICAL SECTION



TRANSVERSE EXPANSION JOINT

NOTES:

1. TRANSVERSE EXPANSION JOINTS TO BE A MAXIMUM OF 50 FEET.
2. ALL CONCRETE TO BE FINISHED WITH CURING COMPOUND.
3. A 6 INCH DEPTH IS REQUIRED.
4. SAW CUT JOINTS TO WIDTH OF TRAIL.
5. NO ABOVE GROUND UTILITIES OR UTILITY SURFACE COVERS/PLATES/MANHOLES SHALL BE LOCATED WITHIN TRAIL AND SHALL BE MINIMUM 2 FEET FROM THE EDGE OF TRAIL.
6. TRAILS WILL MEANDER BUT SHALL BE LOCATED MINIMUM 5 FEET FROM THE BACK OF CURB.
7. SIDE SLOPES SHALL NOT EXCEED 3:1. CUT & FILL SLOPES SHALL TIE INTO EXISTING SLOPES TO CREATE AN EVEN TRANSITION.
8. PLACE SAWCUT CONTRACTION JOINTS 10' O.C. PERPENDICULAR OF TRAIL.
9. PLACE DOWELED EXPANSION JOINTS 10' O.C. PERPENDICULAR OF TRAIL.

" N O T T O S C A L E "

TOWN OF CHAPEL HILL

TOWN OF CHAPEL HILL
STANDARD DETAIL

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STANDARD 10-FT CONCRETE GREENWAY TRAIL

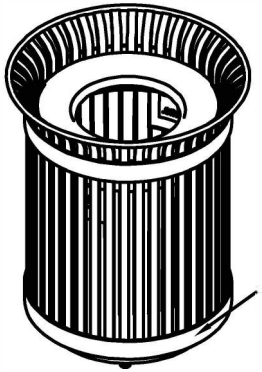
DATE: 02/2017

PR-5.00

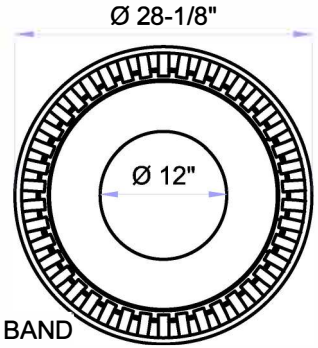
VICTOR STANLEY, INC.®
-Manufacturers of Quality Site Furnishings since 1962-

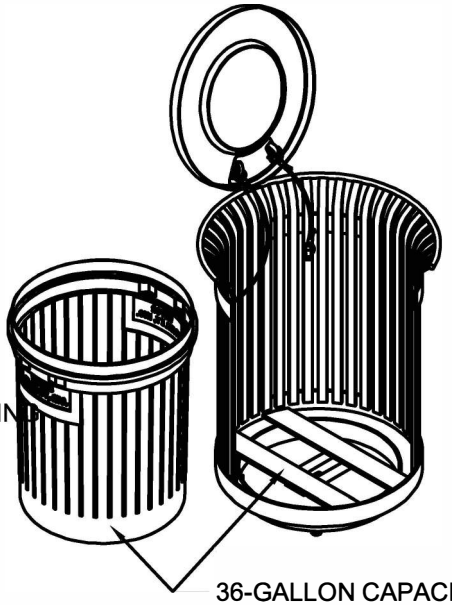
P.O. DRAWER 330 - DUNKIRK, MD 20754 USA
TOLL FREE: (800) 368-2573 (USA & CANADA)
TEL (301) 855-8300 - FAX (410) 257-7579
WEB SITE: HTTP://WWW.VICTORSTANLEY.COM

* ALL DIMENSIONS ARE IN INCHES *

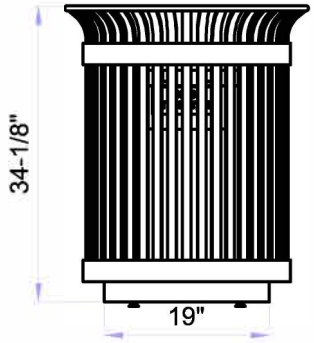


1/4" x 2-1/2"
HORIZONTAL
SOLID STEEL BAND



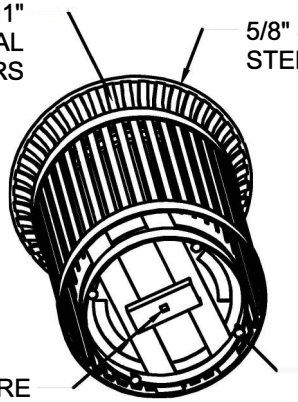


36-GALLON CAPACITY HIGH
DENSITY PLASTIC LINER
(WEIGHT NOT TO EXCEED 6 LBS.)
SITS ON 3/8" x 3" SUPPORT BARS



3/8" x 1"
VERTICAL
STEEL BARS

5/8" SOLID
STEEL TOP RIM



3/4" SQUARE
CENTER ANCHOR
BOLT HOLE

LEVELING FEET WITH
A 3/8" DIAMETER
THREADED STEEL SHAFT

AVAILABLE OPTIONS:
POWDER COATING
10 STANDARD COLORS, 2 OPTIONAL METALLIC COLORS,
CUSTOM COLORS (INCLUDING THE RAL RANGE)
CUSTOM PLAQUES & DECALS.
AVALIABLE WITH STEEL PLAQUES IN VARIOUS SIZES
AND PRESSURE SENSITIVE VINYL OUTDOOR DECALS.

S-424

IRONSITES® SERIES

36-GALLON LITTER RECEPTACLE
SHOWN: STANDARD TAPERED FORMED LID

REV. 4/29/13 DRAWN C.D.B. 2013-445

" N O T T O S C A L E "

TOWN OF CHAPEL HILL

TOWN OF CHAPEL HILL
STANDARD DETAI L

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01/2026 - Logo only

TRASH RECEPTACLE

DATE: 02/2017

SS-1.01

VICTOR STANLEY, INC.®
-Manufacturers of Quality Site Furnishings since 1962-

NOTES:

1. DRAWINGS NOT TO SCALE. DO NOT SCALE DRAWINGS.

2. ALL FABRICATED METAL COMPONENTS ARE STEEL SHOTBLASTED, ETCHED, PHOSPHATIZED, PREHEATED, AND ELECTROSTATICALLY POWDER-COATED WITH T.G.I.C. POLYESTER POWDED COATINGS. PRODUCTS ARE FULLY CLEANED AND PRETREATED, PREHEATED AND COATED WHILE HOT TO FILL CREVICES AND BUILD FILM COATING. COATED PARTS ARE THEN FULLY CURED TO COATING MANUFACTURER'S SPECIFICATIONS. THE THICKNESS OF THE RESULTING FINISH AVERAGES 8-10 MILS (200-250 MICRONS).

3. THIS VICTOR STANLEY, INC. PRODUCT MUST BE PERMANENTLY AFFIXED TO THE GROUND. CONSULT YOUR LOCAL CODES FOR REGULATIONS.

4. VICTOR STANLEY, INC., PLASTIC INNER LINERS ARE MOLDED ON TOOLING DESIGNED FOR AND OWNED BY VICTOR STANLEY, INC. THEY OFFER MAXIMUM CAPACITY AND STRENGTH WITH LIGHTWEIGHT CONSTRUCTION USING CRITICAL MOLDED RIBS, INTEGRAL HANDHOLDS, AND HIGH-STRENGTH MATERIALS. THIS MINIMIZES HANDLING DIFFICULTY AND FACILITATES EASY EMPTYING AND STORAGE WHILE AFFORDING LONG SERVICE LIFE.

5. ANCHOR BOLT(S) NOT PROVIDED BY VICTOR STANLEY, INC.

6. FOR HIGH SALT ABUSIVE CLIMATES, HOT DIP GALVANIZING BEFORE POWDER COATING IS AVAILABLE. SEE WRITTEN SPECIFICATIONS FOR DETAILS.

7. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE. CONTACT MANUFACTURER FOR DETAILS.

8. THIS PRODUCT IS SHIPPED FULLY ASSEMBLED.

LIDS

STANDARD TAPERED FORMED LID (AS SHOWN). AVAILABLE WITH OPTIONAL DOME LID, DOME LID WITH STAINLESS STEEL ASHTRAY, CONVEX LID, CONVEX LID WITH SELF-CLOSING DOOR, RAIN BONNET LID, RAIN BONNET LID WITH STAINLESS STEEL ASHTRAY, AND RECYCLE LIDS. ASHTRAYS AVAILABLE WITH OPTIONAL ASHTRAY COVER.

SECURITY

LID IS SECURED WITH VINYL COATED GALVANIZED STEEL AIRCRAFT CABLE. CABLE IS LOOPED AROUND WELDED IN PLACE ATTACHMENT BRACKETS AND CRIMPED IN PLACE. AVAILABLE WITH OPTIONAL MOUNT WITH 3 IN-LINE ANCHOR HOLES AND OPTIONAL BOTTOM PLATE COVER.

S-424

IRONSITES® SERIES

36-GALLON LITTER RECEPTACLE

SHOWN: STANDARD TAPERED FORMED LID

REV. 4/29/13 DRAWN C.D.B. 2013-445

"NOT TO SCALE"

TOWN OF CHAPEL HILL

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STANDARD DETAI L

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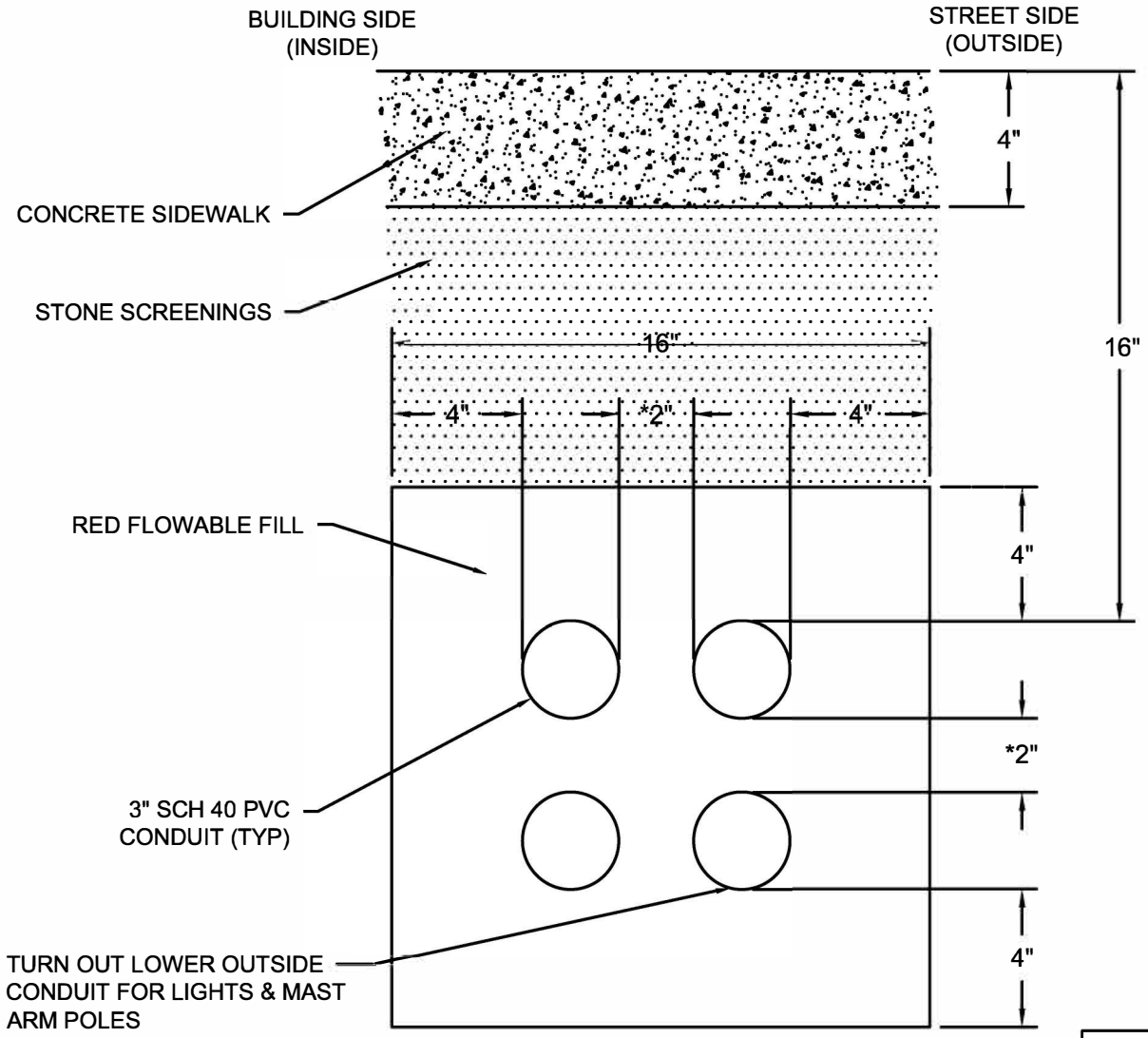
TRASH RECEPTACLE

DATE: 02/2017

SS-1.02



* **DIMENSION VARIES WITH TYPE OF CONDUIT SPACER USED.**

NOTES:

1. **REFER TO DETAIL SS-1.2 FOR INSTALLATION OF #2 BARE COPPER GROUNDING WIRE.**
2. **DRAWING NOT TO SCALE.**

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STANDARD DETAIL

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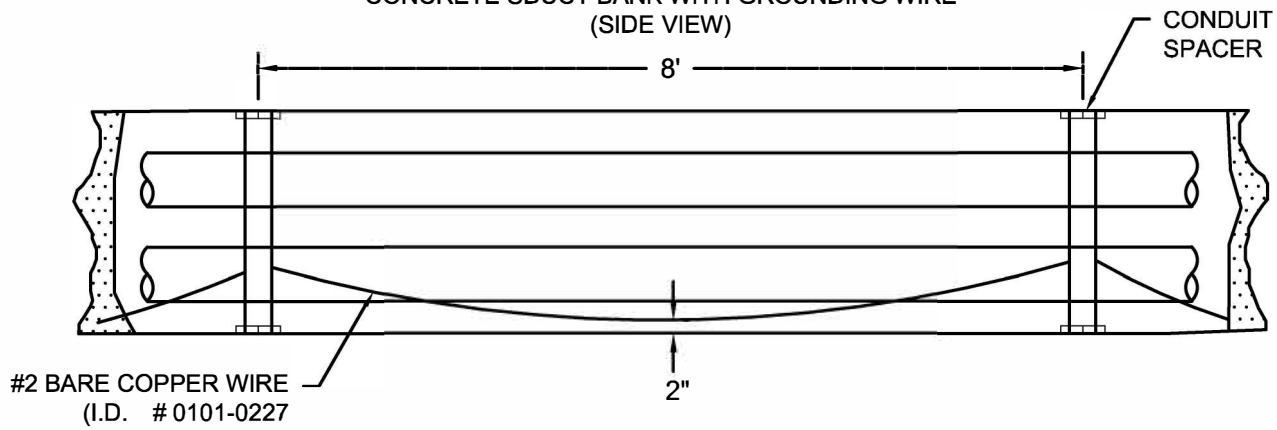
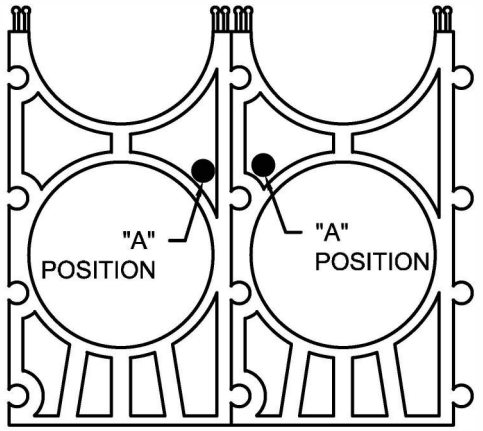
DUCT BANK INSTALLATION

SS-2.00

CONCRETE SDUCT BANK WITH GROUNDING WIRE
(SIDE VIEW)





CONDUIT SPACE
(END VIEW)

NOTES:

1. **THE #2 BARE COPPER WIRE SHOULD BE INSTALLED IN THE CONCRETE OF THE DUCT BANK INSTALLATION FOR THE PURPOSES OF LOWER THE GROUND RESISTANCES IN THE TRANSFORMER VAULTS AND MANHOLES. THIS EMBEDDING CONCRETE METHOD WILL OBTAIN LOWER GROUND RESISTANCES THAN WIRE DIRECTLY BURIED IN THE SOIL OR A LARGE NUMBER OF GROUND RODS. THE #2 BARE COPPER WIRE IS USED FOR THE PURPOSE OF GROUNDING, NOT SUBSTITUTE FOR THE SYSTEM.**
2. **DRAWING NOT TO SCALE.**
3. **REFER TO DUKE POWER CO. STANDARD DETAIL UD-42a " DUCT BANK INSTALLATION (GROUNDING)" DATED 07/25/1988.**

CONSTRUCTION GUIDELINES:

1. **INSTALL THE CONDUIT SPACERS AND THE BOTTOM ROW OF PVC CONDUIT IN THE TRENCH.**
2. **INSTALL THE #2 BARE COPPER WIRE ALTERNATING THE WIRE FROM POSITION "A" TO POSITION "B" IN THE CONDUIT SPACERS. THE #2 BARE COPPER WIRE SHOULD BE SAGGED WITH A 2" CLEARANCE FROM THE BOTTOM OF THE CONCRETE DUCT BANK. NOTE: THE #2 BARE COPPER WIRE WILL HAVE THE MOST CONTACT WITH THE CONCRETE IN THIS ALTERNATING METHOD AND THE 2" CLEARANCE.**
3. **INSTALL THE REMAINING CONDUITS, CONDUIT SPACERS AND CONCRETE IN THE RECOMMENDED MANNER.**
4. **CONNECT THE #2 BARE COPPER WIRE TO THE SYSTEM NEUTRAL IN THE VAULTS AND MANHOLES. ALSO, A DRILLED 1/2" HOLE IS REQUIRED IN THE VAULT WALL FOR THE #2 BARE COPPER WIRE. THE 1/2" HOLE AND WIRE SHOULD BE WATERPROOFED WITH SEALING TAPE a(I.D. #0521-0204). THE #2 COPPER WIRE CAN BE SPLICED IN THE VAULTS AND MANHOLES.**

" N O T T O S C A L E "

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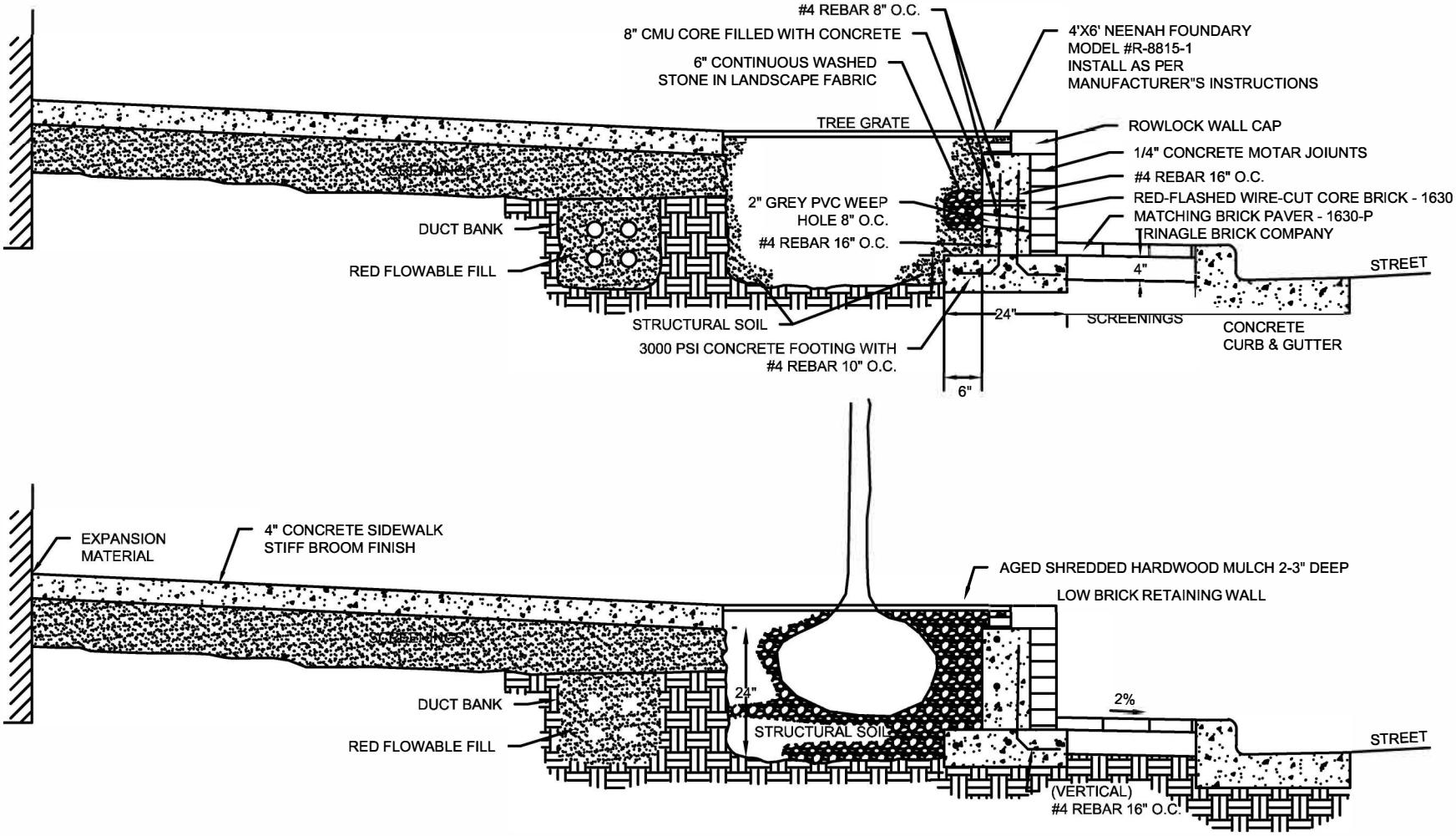
DUCT BANK INSTALLATION (GROUNDING)

SS-3.00



- TREE PIT CONSISTS OF STRUCTURAL SOIL 24" DEEP WITHIN LIMITS SHOWN ON THE PLAN.
- STRUCTURAL SOIL IS 70% STALITE ½" EXPANDED AGGREGATE AND 30% SANDY LOAM.

SIDEWALK NOTE:

- 3000 PSI WITH FIBER
- CONTROL JOINTS TOOLED
  PERPENDICULAR TO BUILDINGS
  APPROXIMATELY EVERY 5-6' ±
- MAXIMUM CROSS SLOPE 2% (1/4" FALL/FT)
- C JOINT SAW-CUT PARALLEL TO BUILDINGS
- STAMPED 'TCH' AT SIDEWALK EDGE WHERE DUCT BANK TURN-OUT CROSSES.

WALL NOTES:

- WHOLE BRICKS SHALL BE USED IN ROWLOCK CAP AT RETAINING WALL CORNERS WITH A PAVER BRICK ON THE END OF A ROW OF CORE BRICKS, NO BEVELED CUT BRICKS AT RETAINING WALL CORNER.

"NOT TO SCALE"

TOWN OF CHAPEL HILL

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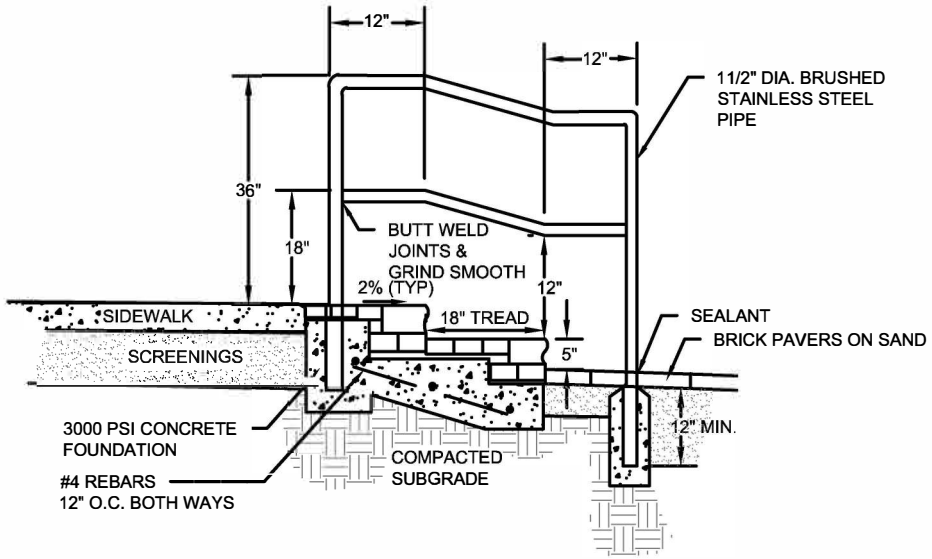
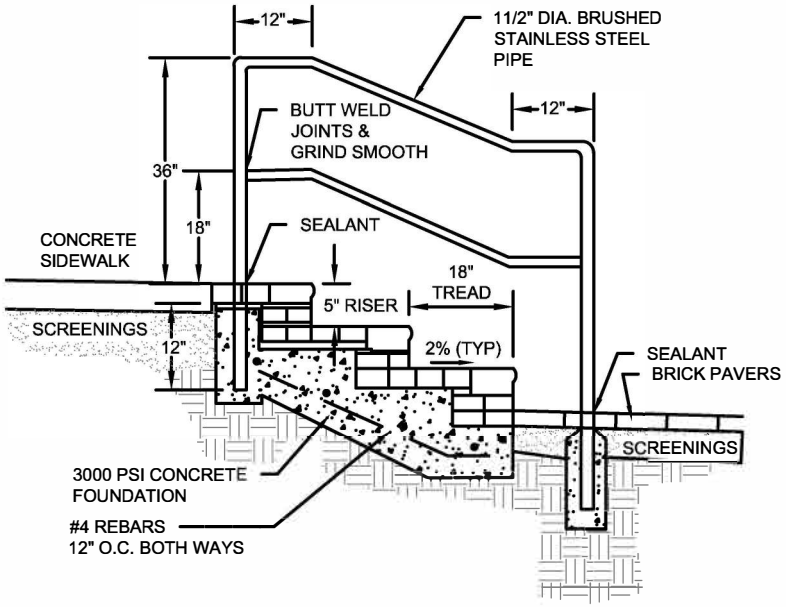
BRICK RETAINING WALL WITH TREE PIT

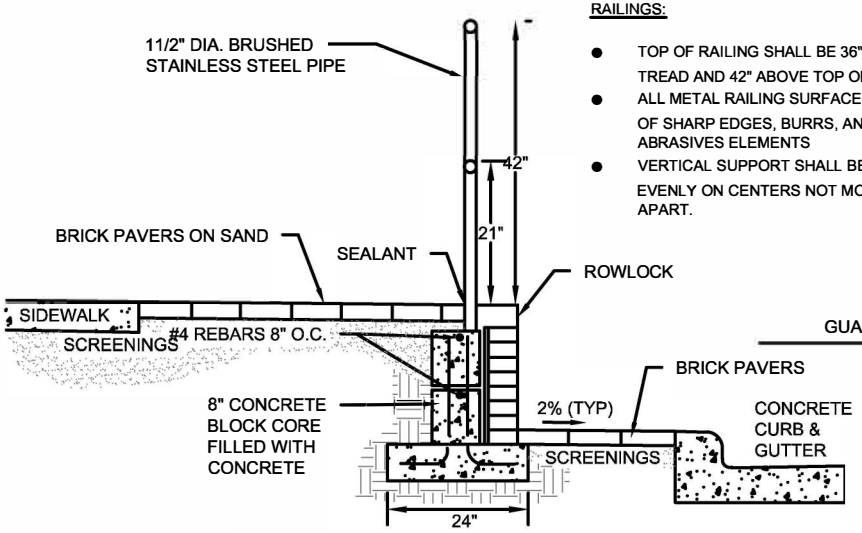
SS-4.00



HANDRAILS AT STEPS



HANDRAILS AT STEPS



GUARD RAIL ON TOP OF WALL

RAILINGS:

- TOP OF RAILING SHALL BE 36" ABOVE STEP TREAD AND 42" ABOVE TOP OF WALL
- ALL METAL RAILING SURFACE SHALL BE FREE OF SHARP EDGES, BURRS, AND OTHER ABRASIVES ELEMENTS
- VERTICAL SUPPORT SHALL BE SPACED EVENLY ON CENTERS NOT MORE THAN 6'-0" APART.

STEPS:

- TREAD ARE RED-FLASHED WIRE-CUT MODULAR PAVER BRICK IN RUNNING BOND PATTERN WITH OGEE STEP TREAD ROWLOCK AT FONT EDGE.
- RISERS ARE RED-FLASHED WIRE-CUT CORE BRICK.
- TOP STEP FLUSH WITH CONCRETE SIDEWALK GRADE.
- STEPS SHALL BE DESIGNED USING THE FORMULA: 2XRISER HEIGHT+ TREAD LENGTH = 27"-28".

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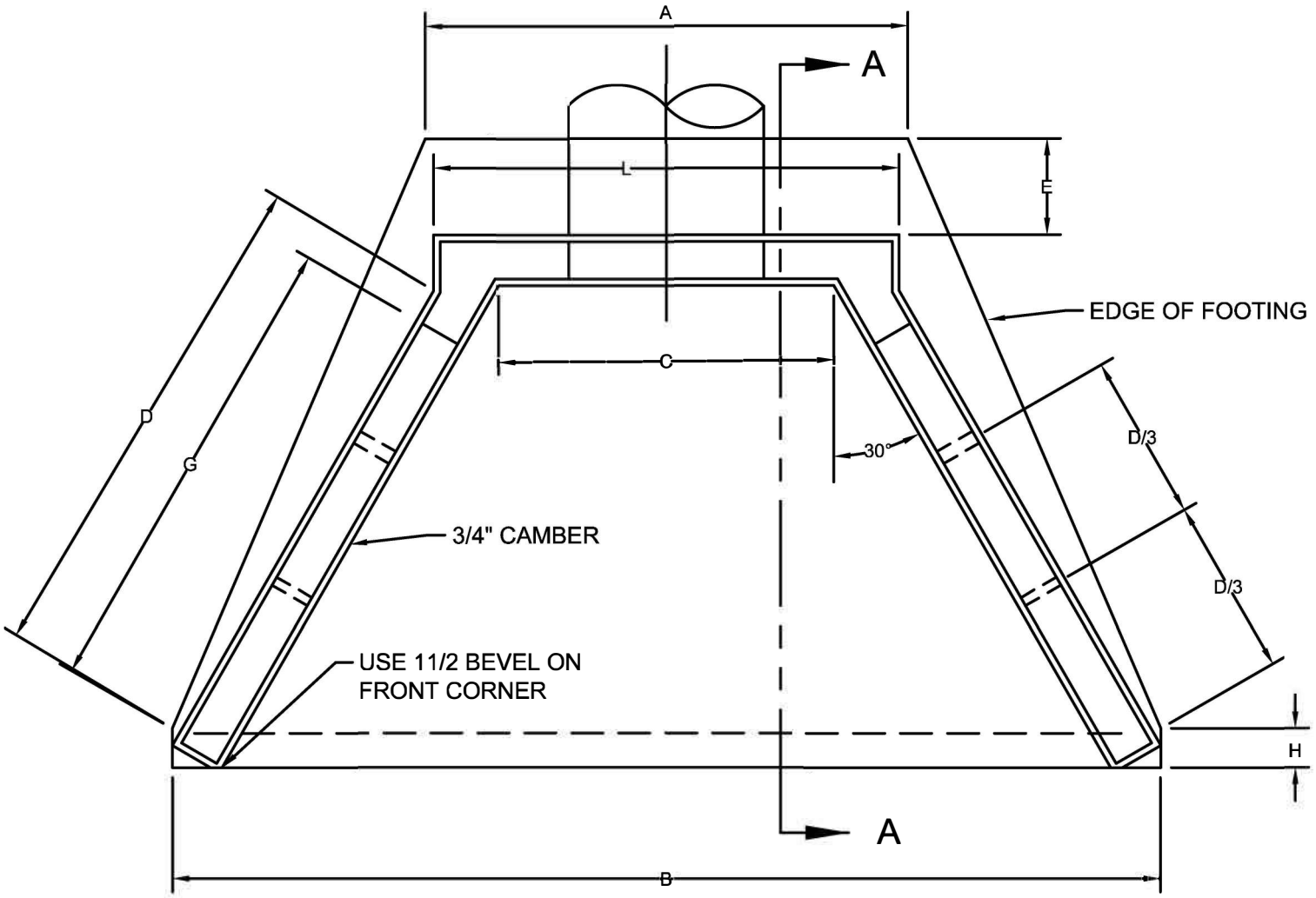
BRICK RETAINING WALL WITH STEPS, HANDRAIL, GUARDRAIL

SS-5.00



PLAN VIEW

NOTES:

1. **SEE STANDARD DETAIL SD-0.05 AND SD-0.06 FOR DIMENSIONS.**
2. **SEE STANDARD DETAIL SD-02 FOR SECTION A-A.**
3. **USE 3500 P.S.I. CONCRETE.**

" N O T T O S C A L E "

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TOWN OF CHAPEL HILL
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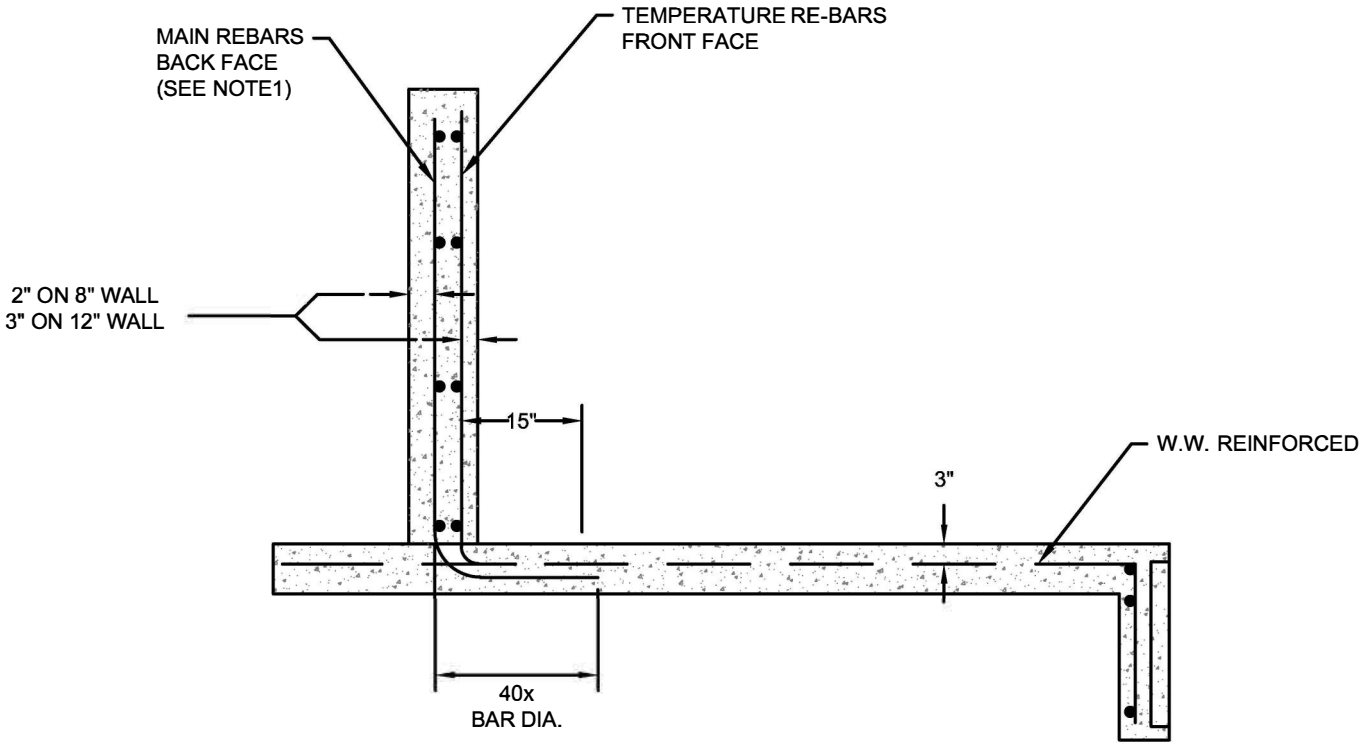
REINFORCED CONCRETE HEADWALL

SW-1.01



NOTES:

1. **USE NO. 4 REBAR @ 12" O.C. BOTH FACES HORIZONTAL & VERTICAL.**

2. **SEE STANDARD DETAIL SD-0.05 AND SD-0.06 FOR DIMENSIONS.**

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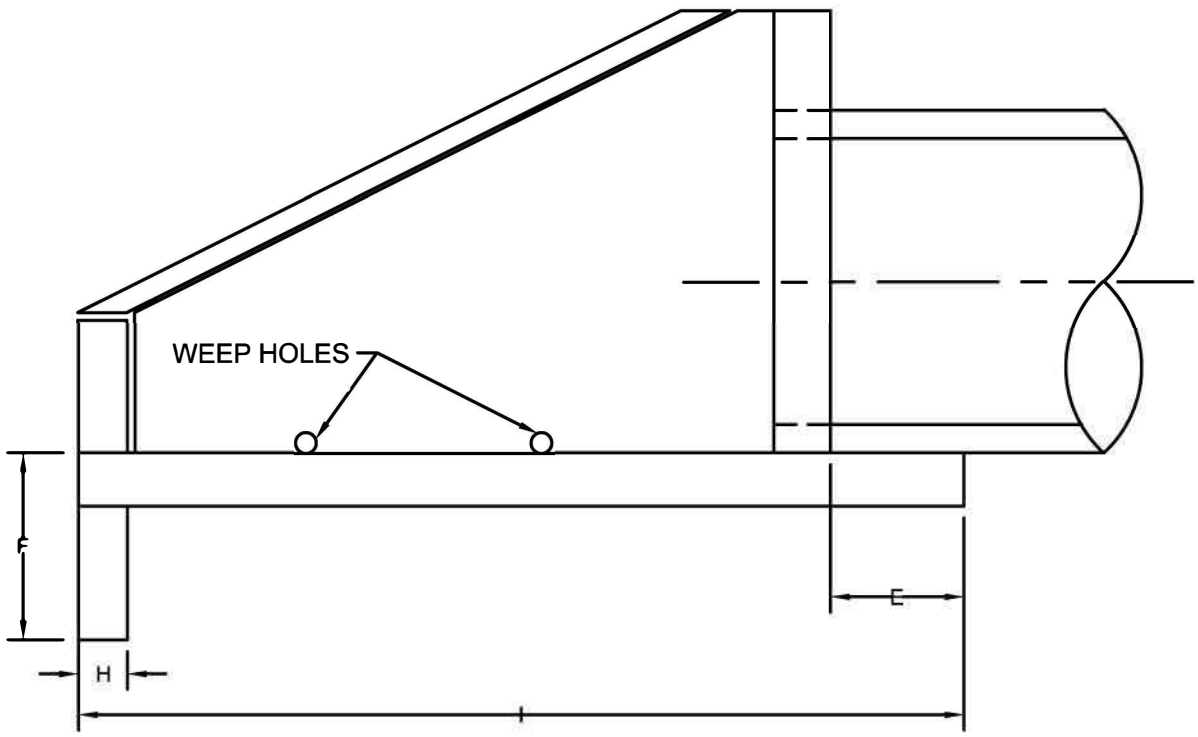
REINFORCED CONCRETE HEADWALL

SW-1.02



NOTES:

1. **SEE STANDARD DETAIL SD-0.05 AND SD-0.06 FOR DIMENSIONS.**

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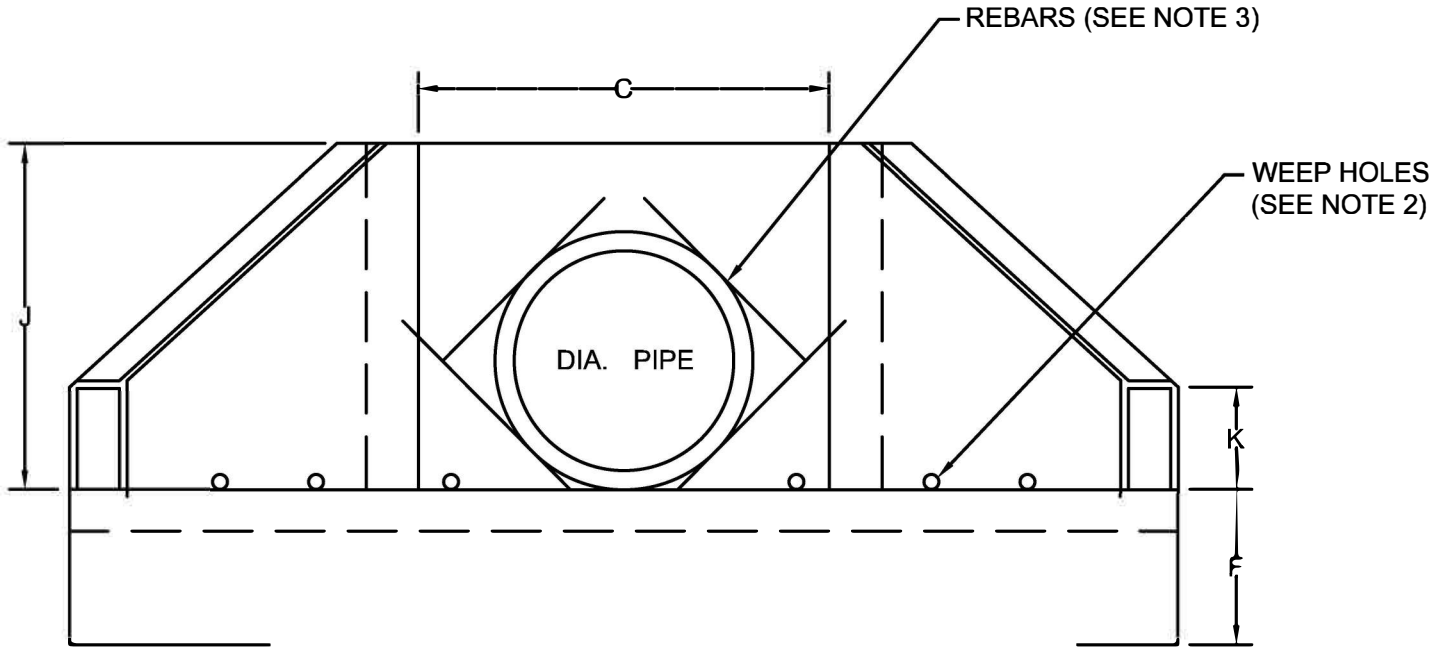
REINFORCED CONCRETE HEADWALL

SW-1.03



FRONT VIEW

NOTES:

1. **SEE STANDARD DETAIL SD-0.05 AND SD0.06 FOR DIMENSIONS.**
2. **WEEP HOLES USED WITH 15"-42" PIPE BE PLACED 6" INSIDE WING, 48" - 96" PIPE, WEEP HOLES WILL BE 8" INSIDE WING.**
3. **PLACE 4 REBARS AROUND PIPE IN BOTH FACES TO PROTECT AGAINST DIAGONAL TENSION.**

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REINFORCED CONCRETE HEADWALL

SW-1.04

DIMENSIONS FOR REINFORCED CONCRETE SINGLE PIPE HEADWALL WITH WING WALLS

PIPE SIZE	SHELL THICKNESS	WALL THICKNESS	SLAB THICKNESS	A	B	C	D	E	F	G	H	I	J	K	L
15"	2-1/4"	8"	6"	4'-10"	9'-4"	3'-7"	4'-2"	1'-0"	1'-6"	3'-8"	6"	5'-8"	2'-7"	1'-0"	5'-2"
18"	2-1/2"	8"	6"	5'-5"	10'-5"	3'-11"	4'-11"	1'-0"	1'-6"	4'-5"	6"	6'-3"	2'-11"	1'-0"	5'-6"
24"	3"	8"	6"	6'-4"	12'-4"	4'-6"	6'-3"	1'-0"	1'-6"	5'-9"	6"	7'-5"	3'-6"	1'-0"	6'-1"
30"	3-1/2"	8"	6"	7'-3"	14'-3"	5'-1"	7'-7"	1'-0"	1'-6"	7'-1"	6"	8'-7"	4'-1"	1'-0"	6'-8"
36"	4"	8"	6"	7'-5"	15'-1"	5'-8"	7'-10"	1'-6"	2'-0"	7'-4"	6"	9'-4"	4'-8"	1'-6"	7'-3"
42"	4-1/2"	8"	6"	8'-4"	17'-0"	6'-3"	9'-2"	1'-6"	2'-0"	8'-8"	6"	10'-6"	5'-3"	1'-6"	7'-10"
48"	5"	8"	6"	9'-4"	18'-11"	6'-10"	10'-6"	1'-6"	2'-0"	10'-0"	6"	11'-7"	5'-10"	1'-6"	8'-5"
54"	5-1/2"	8"	6"	10'-1"	19'-9"	7'-5"	10'-9"	1'-6"	2'-0"	10'-3"	8"	11'-10"	6'-5"	2'-0"	9'-0"
60"	6"	12"	6"	10'-10"	22'-5"	8'-0"	12'-1"	2'-0"	2'-6"	11'-7"	8"	14'-0"	7'-0"	2'-0"	10'-4"
66"	6-1/2"	12"	8"	11'-9"	24'-4"	8'-7"	13'-5"	2'-0"	2'-6"	12'-11"	8"	15'-2"	7'-7"	2'-0"	10'-11"
72"	7"	12"	8"	12'-5"	25'-1"	9'-2"	13'-7"	2'-0"	2'-6"	13'-1"	8"	15'-3"	8'-2"	2'-6"	11'-6"
78"	7-1/2"	12"	8"	13'-4"	27'-0"	9'-9"	14'-11"	2'-0"	2'-6"	14'-5"	8"	16'-5"	8'-9"	2'-6"	12'-1"
84"	8"	12"	8"	13'-11"	27'-9"	10'-4"	15'-1"	2'-0"	2'-6"	14'-7"	8"	16'-7"	9'-4"	3'-0"	12'-8"
90"	8-1/2"	12"	8"	14'-10"	29'-9"	10'-11"	16'-6"	2'-0"	2'-6"	16'-0"	8"	17'-10"	9'-11"	3'-0"	13'-3"
96"	9"	12"	10"	15'-10"	30'-6"	11'-6"	16'-8"	2'-0"	2'-6"	16'-2"	12"	17'-11"	10'-6"	3'-6"	13'-10"
102"	9-1/2"	14"	10"	16'-11"	32'-10"	12'-1"	18'-0"	2'-0"	2'-6"	17'-6"	12"	19'-4"	11'-1"	3'-6"	14'-10"
108"	10"	14"	10"	17'-6"	33'-8"	12'-8"	18'-3"	2'-0"	2'-6"	17'-9"	12"	19'-7"	11'-8"	4'-0"	15'-5"
114"	10-1/2"	16"	10"	18'-5"	35'-10"	13'-3"	19'-7"	2'-0"	2'-6"	19'-1"	12"	21'-0"	12'-3"	4'-0"	16'-3"
120"	11"	16"	10"	19'-5"	37'-10"	13'-10"	20'-11"	2'-0"	2'-6"	20'-0"	12"	22'-2"	12'-10"	4'-0"	16'-11"

CONCRETE DOUBLE PIPE HEADWALL

A	B	C	L
8'-6"	13'-0"	7'-3"	8'-9"
9'-4"	14'-4"	7'-10"	9'-5"
10'-10"	16'-10"	9'-0"	10'-7"
12'-4"	19'-4"	9'-2"	11'-9"
13'-1"	20'-9"	11'-4"	12'-11"
14'-7"	23'-3"	12'-6"	14'-1"
16'-2"	25'-9"	13'-8"	15'-3"
17'-6"	27'-2"	14'-10"	16'-5"
18'-10"	30'-5"	16'-0"	18'-4"
20'-4"	32'-11"	17'-2"	19'-6"
21'-7"	34'-3"	18'-4"	20'-8"
23'-1"	36'-9"	19'-6"	21'-10"
24'-9"	38'-1"	20'-8"	23'-0"
25'-9"	40'-8"	21'-10"	24'-2"
27'-4"	42'-0"	23'-0"	25'-4"
29'-0"	44'-11"	24'-2"	26'-11"
30'-2"	46'-4"	25'-4"	28'-1"
31'-8"	49'-1"	28'-6"	29'-6"
33'-3"	51'-8"	27'-8"	30'-9"

NOTE:
1) REFER TO DETAIL SD-1E FOR SINGLE AND DOUBLE PIPE HEADWALL REINFORCING SCHEDULE.
2) SEE DOUBLE PIPE HEADWALL DIMENSIONS FOR A, B, C, &L, ALL OTHER DIMENSIONS REMAIN THE SAME FOR EITHER DOUBLE OR SINGLE PIPE.
3) ALLOW 2' BETWEEN PIPES FOR DOUBLE HEADWALL.

" N O T T O S C A L E "

TOWN OF CHAPEL HILL

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REINFORCED CONCRETE HEADWALL

SW-1.05

REINFORCING SCHEDULE

PIPE SIZE	BACK FACE WALL REINFORCEMENT		SLAB REINFORCEMENT	FRONT FACE TEMP. REINFORCEMENT IN FRONT FACE OF WALLS (COMPRESSION STEEL)	CUBIC YARDS OF CONCRETE FOR SINGLE PIPE
	HORIZONTAL	VERTICAL			
15"	#3 @ 12" O.C.	#3 @ 12" O.C.	6-6x10-10 WIRE MESH REINF.	#4 @ 18" HOR. AND VERT.	1.61
18"	#3 @ 12" O.C.	#3 @ 12" O.C.	6-6x10-10 WIRE MESH REINF.	#4 @ 18" HOR. AND VERT.	1.96
24"	#3 @ 12" O.C.	#3 @ 12" O.C.	6-6x10-10 WIRE MESH REINF.	#4 @ 18" HOR. AND VERT.	2.67
30"	#3 @ 12" O.C.	#3 @ 12" O.C.	6-6x10-10 WIRE MESH REINF.	#4 @ 18" HOR. AND VERT.	3.49
36"	#3 @ 12" O.C.	#3 @ 12" O.C.	6-6x10-10 WIRE MESH REINF.	#4 @ 18" HOR. AND VERT.	4.21
42"	#3 @ 12" O.C.	#3 @ 12" O.C.	6-6x10-10 WIRE MESH REINF.	#4 @ 18" HOR. AND VERT.	4.9
48"	#3 @ 12" O.C.	#3 @ 12" O.C.	6-6x10-10 WIRE MESH REINF.	#4 @ 18" HOR. AND VERT.	6.33
54"	#3 @ 12" O.C.	#4 @ 12" O.C.	6-6x10-10 WIRE MESH REINF.	#4 @ 18" HOR. AND VERT.	7.23
60"	#3 @ 12" O.C.	#4 @ 12" O.C.	6-6x10-10 WIRE MESH REINF.	#4 @ 18" HOR. AND VERT.	11.25
66"	#4 @ 12" O.C.	#4 @ 12" O.C.	6-6x6-6 WIRE MESH REINF.	#4 @ 18" HOR. AND VERT.	14.67
72"	#4 @ 12" O.C.	#4 @ 12" O.C.	6-6x6-6 WIRE MESH REINF.	#4 @ 12" HOR. AND VERT.	15.75
78"	#4 @ 12" O.C.	#4 @ 12" O.C.	6-6x6-6 WIRE MESH REINF.	#4 @ 12" HOR. AND VERT.	18.04
84"	#4 @ 12" O.C.	#5 @ 12" O.C.	6-6x6-6 WIRE MESH REINF.	#4 @ 12" HOR. AND VERT.	19.32
90"	#4 @ 12" O.C.	#5 @ 12" O.C.	6-6x6-6 WIRE MESH REINF.	#4 @ 12" HOR. AND VERT.	21.92
96"	#5 @ 12" O.C.	#6 @ 12" O.C.	6-6x6-6 WIRE MESH REINF.	#4 @ 12" HOR. AND VERT.	26.38
102"	#5 @ 12" O.C.	#6 @ 12" O.C.	6-6x6-6 WIRE MESH REINF.	#4 @ 12" HOR. AND VERT.	32.26
108"	#5 @ 12" O.C.	#6 @ 12" O.C.	6-6x6-6 WIRE MESH REINF.	#4 @ 12" HOR. AND VERT.	34.21
114"	#5 @ 12" O.C.	#8 @ 12" O.C.	6-6x6-6 WIRE MESH REINF.	#4 @ 12" HOR. AND VERT.	40.78
120"	#5 @ 12" O.C.	#8 @ 12" O.C.	6-6x6-6 WIRE MESH REINF.	#4 @ 12" HOR. AND VERT.	44.97

NOTE:

1) REFER TO STANDARD DETAIL SD-1D FOR SINGLE AND DOUBLE PIPE DIMENSIONS.

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TOWN OF CHAPEL HILL

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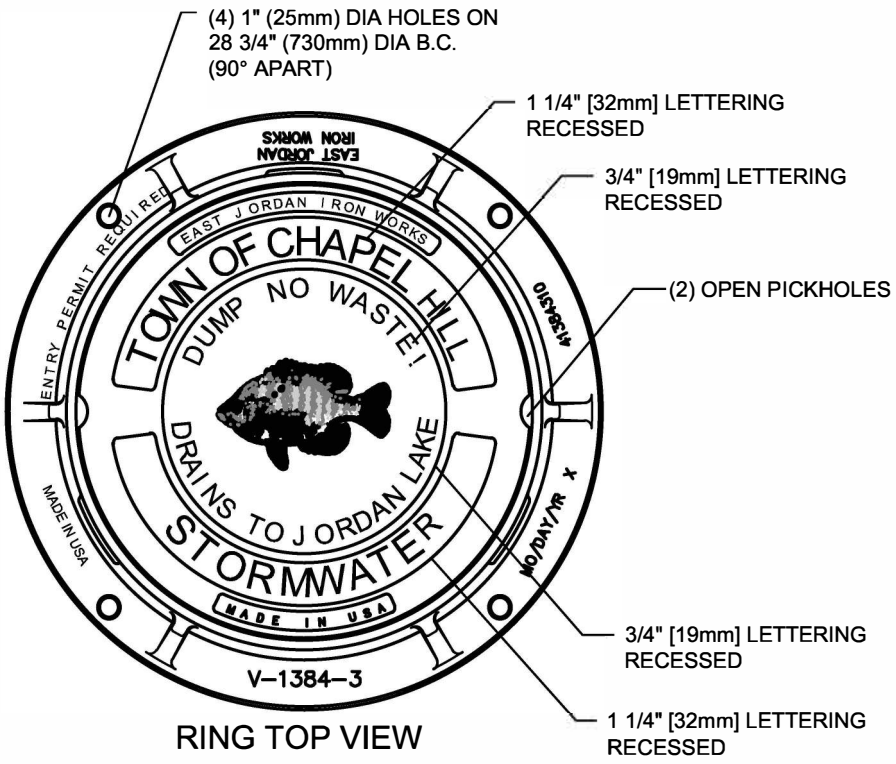
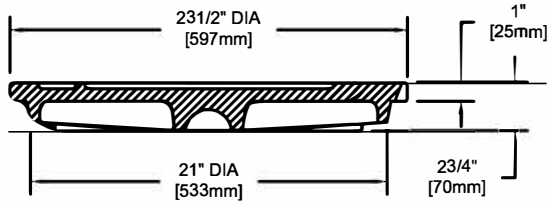
REINFORCED CONCRETE HEADWALL

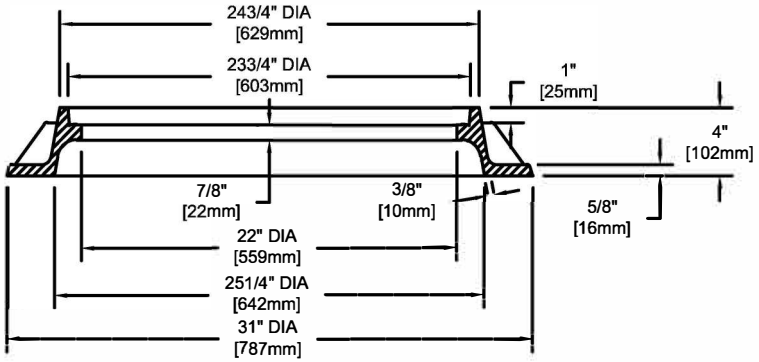
SW-1.06



RING TOP VIEW



COVER SECTION



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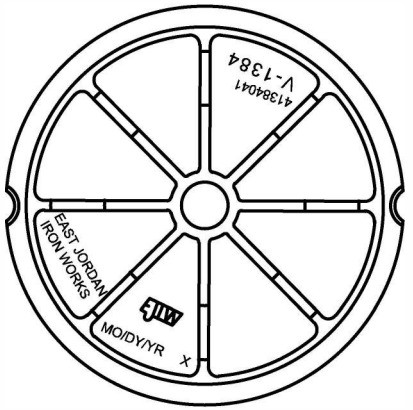

BOTTOM VIEW
OF COVER

TYPE 1 RING & COVER

EAST JORDAN IRON WORKS V1384-3 RING WITH
V1384 COVER OR APPROVED EQUAL
MINIMUM WEIGHTS: RING 90LBS., COVER 120LBS.

1. TYPE 1 RING & COVER TO BE USED IN SIDEWALKS AND YARD AREAS.
2. MATERIAL TO BE GREY IRON CONFORMING TO ASTM A48 CLASS 35 AND SHALL BE UNCOATED.
3. COVER TO MEET PROOF LOAD REQUIREMENTS OF AASHTO M306-89. (40,000 LB. PROOF LOAD)
4. FISH LOGO AND ALL LETTING TO BE CLEAN, CRISP, AND CLEARLY LEGIBLE.
5. CASTING MUST BE MANUFACTURED IN THE UNITED STATE. MANUFACTURER MUST BE APPROVED BY THE TOWN OF CHAPEL HILL.

TOWN OF CHAPEL HILL

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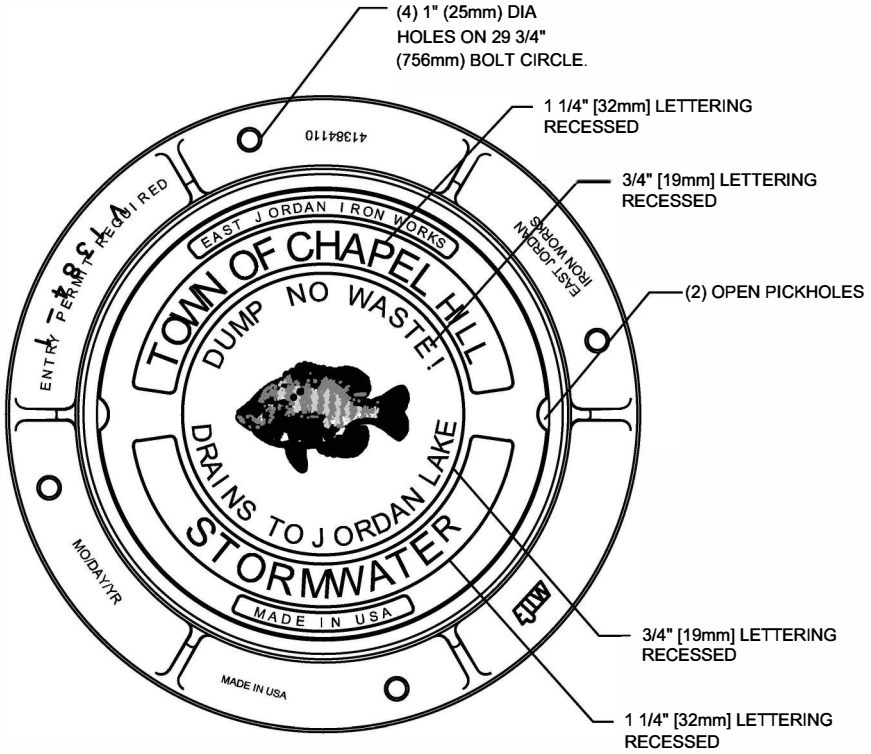
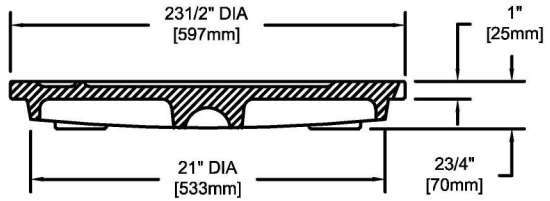
MANHOLE RING &
COVER-TYPE 1

DATE: 02/2017

SW-2.01



RING TOP VIEW



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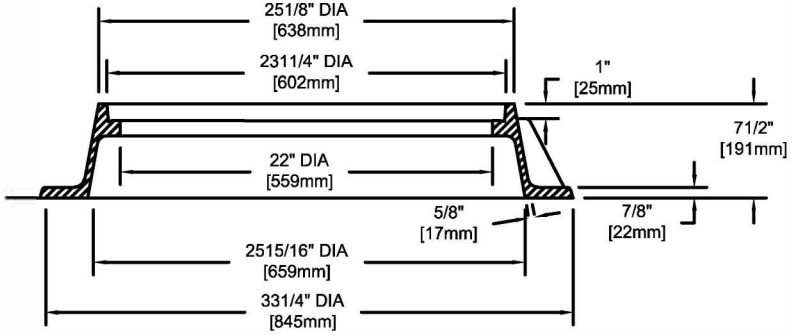

FRAME SECTION

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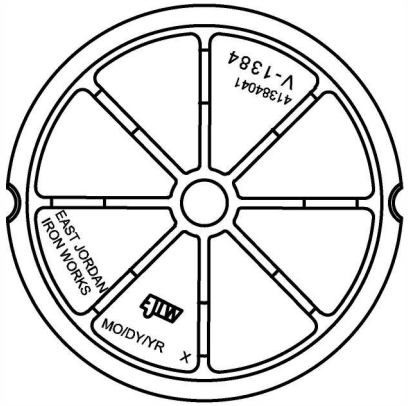

BOTTOM VIEW
OF COVER

TYPE 1 RING & COVER

EAST JORDAN IRON WORKS V1384-1 RING WITH
V1384 COVER OR APPROVED EQUAL
MINIMUM WEIGHTS: RING 90LBS., COVER 120LBS.

1. TYPE 1 RING & COVER TO BE USED IN STREETS.
2. MATERIAL TO BE GREY IRON CONFORMING TO ASTM A48 CLASS 35 AND SHALL BE UNCOATED.
3. COVER TO MEET PROOF LOAD REQUIREMENTS OF AASHTO M306-89. (40,000 LB. PROOF LOAD)
4. FISH LOGO AND ALL LETTING TO BE CLEAN, CRISP, AND CLEARLY LEGIBLE.
5. CASTING MUST BE MANUFACTURED IN THE UNITED STATE. MANUFACTURER MUST BE APPROVED BY THE TOWN OF CHAPEL HILL.

TOWN OF CHAPEL HILL

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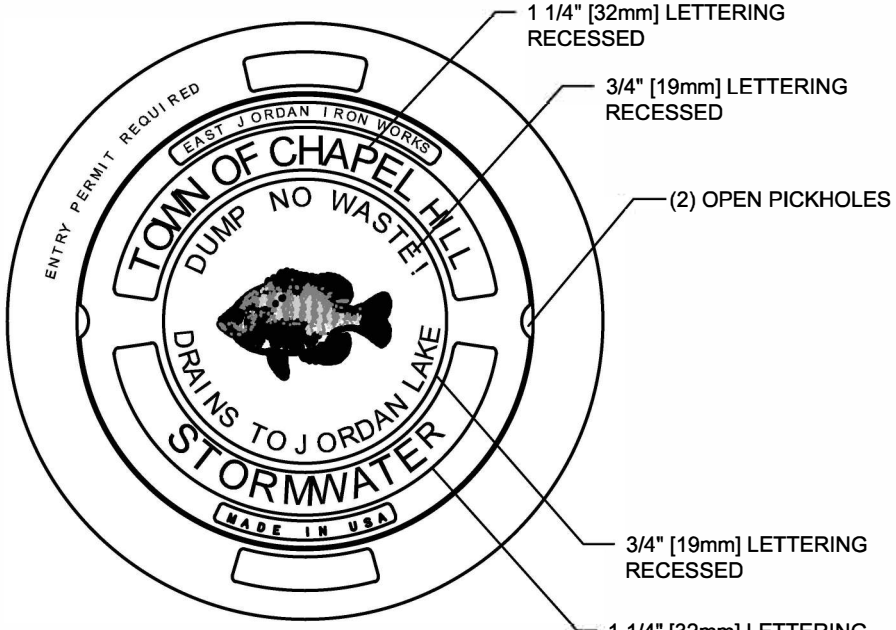
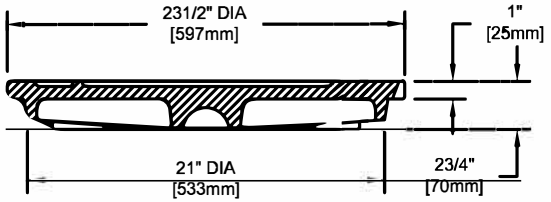
MANHOLE RING &
COVER-TYPE 2

SW-2.02



RING TOP VIEW



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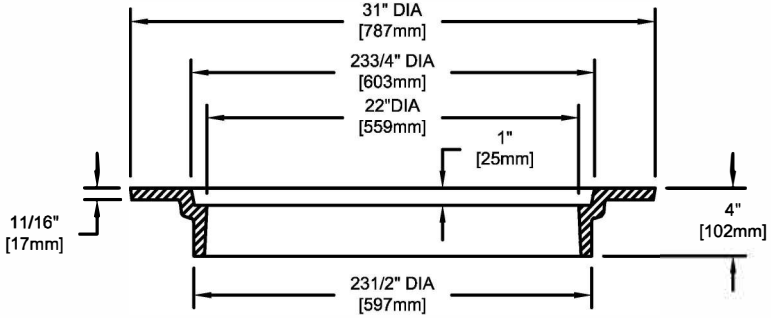
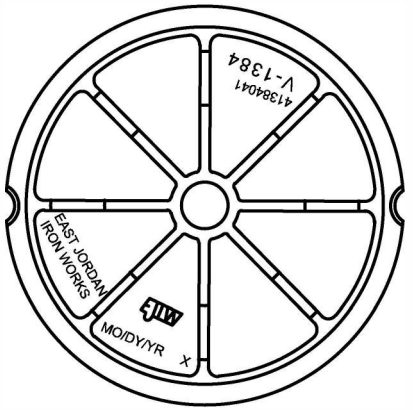


RING SECTION



BOTTOM VIEW OF COVER

TYPE 1 RING & COVER

EAST JORDAN IRON WORKS V1845 RING WITH V1384 COVER OR APPROVED EQUAL
MINIMUM WEIGHTS: RING 160LBS., COVER 120LBS.

1. TYPE 3 RING & COVER TO BE CAST INTO YARD INLET OR JUNCTION BOX TOPS.
2. MATERIAL TO BE GREY IRON CONFORMING TO ASTM A48 CLASS 35 AND SHALL BE UNCOATED.
3. COVER TO MEET PROOF LOAD REQUIREMENTS OF AASHTO M306-89. (40,000 LB. PROOF LOAD)
4. FISH LOGO AND ALL LETTING TO BE CLEAN, CRISP, AND CLEARLY LEGIBLE.
5. CASTING MUST BE MANUFACTURED IN THE UNITED STATE. MANUFACTURER MUST BE APPROVED BY THE TOWN OF CHAPEL HILL.

"NOT TO SCALE"

TOWN OF CHAPEL HILL

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STANDARD DETAI L

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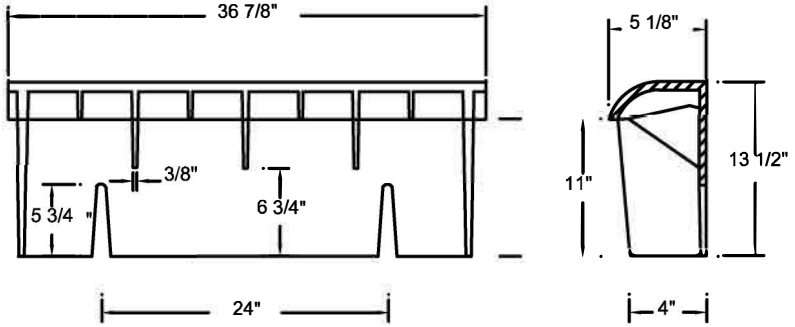
MANHOLE RING & COVER-TYPE 3

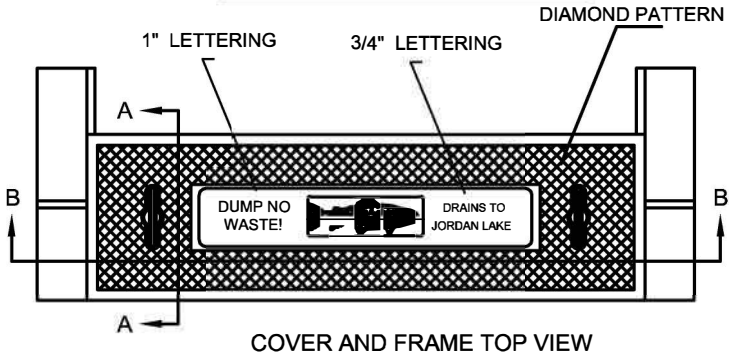
SW-2.03

NCDOT STREETS

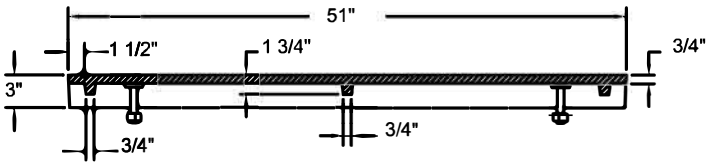


STORMDRAIN CURB INLET HOOD FOR INSTALLATION ON STATE STREETS AND INSTALLATIONS UNDER THE JURISDICTION OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND SHALL COMPLY WITH ASTM A48 CL35. IT SHALL BE A HEAVY DUTY TRAFFIC BEARING GRATE WITH AN APPROXIMATE TOTAL WEIGHT OF 575 LBS. (INCLUDES WEIGHT OF GRATE, FRAME & HOOD).

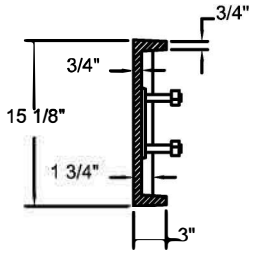
T.O.C.H. STREETS



COVER AND FRAME TOP VIEW



COVER SECTION B-B



COVER SECTION A-A

STORMDRAIN CURB INLET COVER FOR INSTALLATION ON TOWN STREETS AND INSTALLATIONS UNDER THE JURISDICTION OF THE TOWN OF CHAPEL HILL SHALL COMPLY WITH ASTM A48 CL35. IT SHALL BE A LIGHT DUTY COVER HAVING AN APPROXIMATE TOTAL WEIGHT OF 307 LBS. (INCLUDES WEIGHT OF COVER AND TWO LEGS).

NOTES:
1. ALL STORMDRAIN INLET HOODS AND COVERS INSTALLED OR REPLACED WITHIN THE CHAPEL HILL PLANNING JURISDICTION AFTER JULY 31, 2000 SHALL BE PRE-CAST WITH THE MESSAGE: "DUMP NO WASTE! DRAINS TO JORDAN LAKE" (INCLUDING THE CAST IMAGE OF A FISH).
2. PRE-CAST HOODS AND COVERS SHALL BE DESIGNED IN ACCORDANCE WITH THE ABOVE MATERIAL SPECIFICATIONS AND MUST COMPLY WITH APPLICABLE STATE AND TOWN REQUIREMENTS FOR MATERIALS AND INSTALLATION.
3. CASTING MUST BE MANUFACTURED IN THE UNITED STATES. MANUFACTURER MUST BE APPROVED BY THE TOWN OF CHAPEL HILL.

" N O T T O S C A L E "

TOWN OF CHAPEL HILL

DATE: 02/2017

TOWN OF CHAPEL HILL
STANDARD DETAI L

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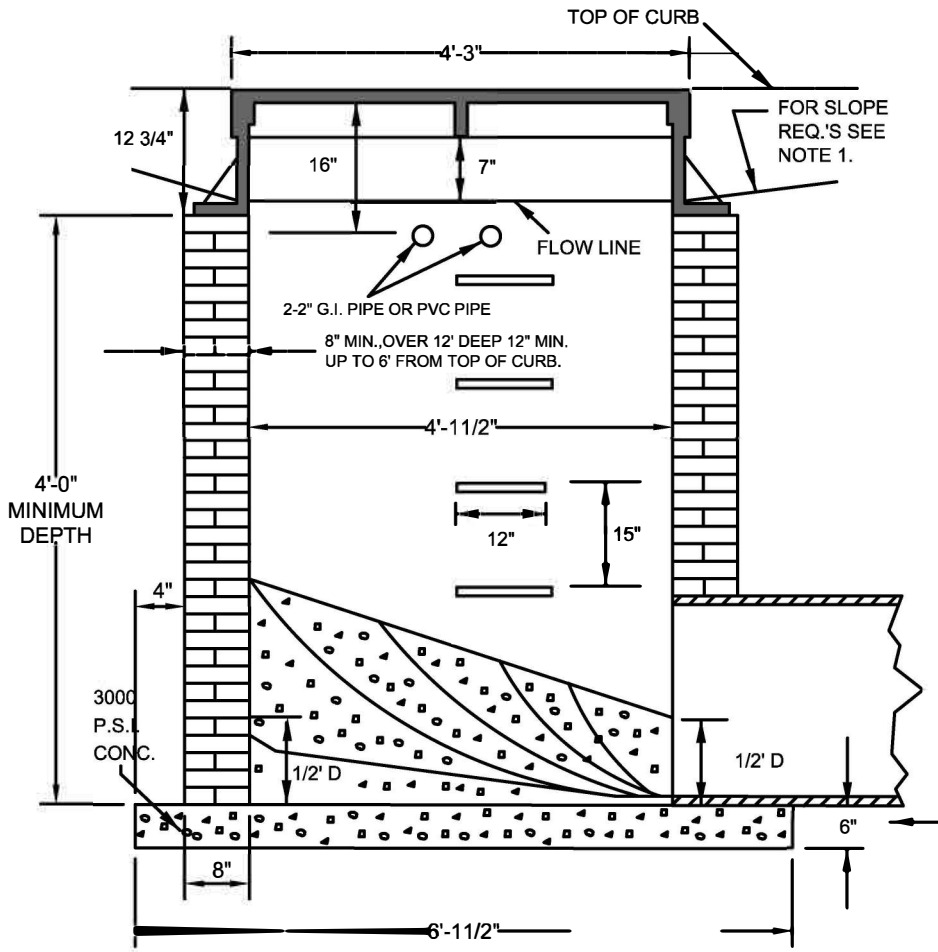
CURB INLET HOOD & COVER

SW-2.04



NOTES:

1. **THE SLOPE OF THE GUTTER TO THE CATCH BASIN ON THE UPHILL SIDE SHALL BEGIN 10' FROM THE THE CATCH BASIN. THE SLOPE OF THE GUTTER TO THE CATCH BASIN ON THE DOWNHILL SIDE, SHALL BEGIN 10' FROM THE CATCH BASIN.**
2. **STEPS SHALL BE INSTALLED IN ALL CATCH BASINS OVER 3' IN DEPTH. DEPTH SHALL BE MEASURED FROM THE TOP OF THE GUTTER TO THE INVERT OF THE CATCH BASIN.**
3. **SOLID CONCRETE BRICKS MAY BE USED IN 4X4X8 OR 4X8X16 SIZES.**
4. **NCDOT APPROVED PRECAST CONCRETE BOXES ACCEPTABLE USING STANDARD 5' CASTINGS.**
5. **DOMESTIC CASTING REQUIRED WITHIN STREET RIGHT OF WAY.**

"NOT TO SCALE"

TOWN OF CHAPEL HILL

TOWN OF CHAPEL HILL
STANDARD DETAIL

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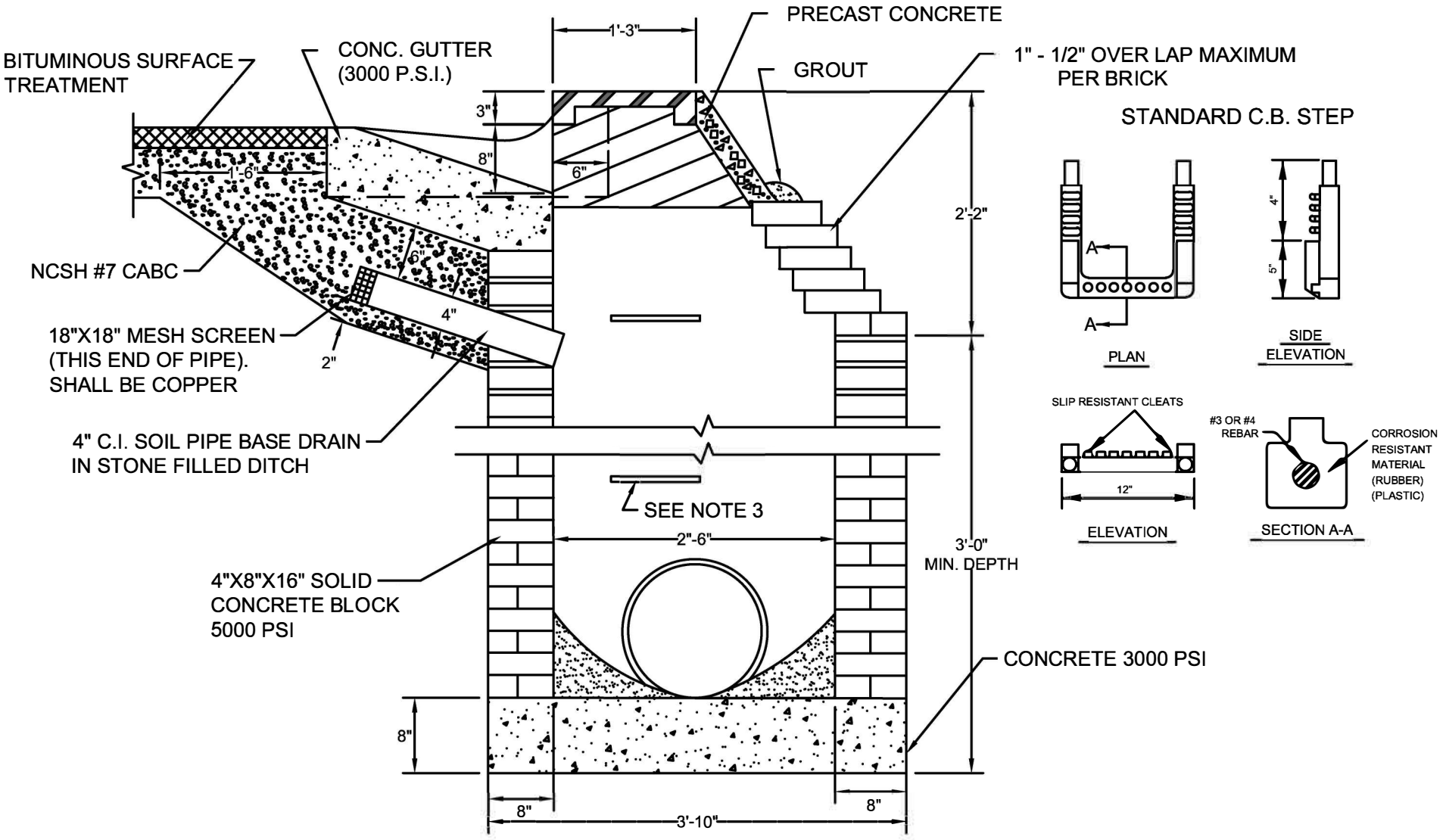
CURB INLET FRONT VIEW

SW-3.01



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TOWN OF CHAPEL HILL

TOWN OF CHAPEL HILL
STANDARD DETAI L

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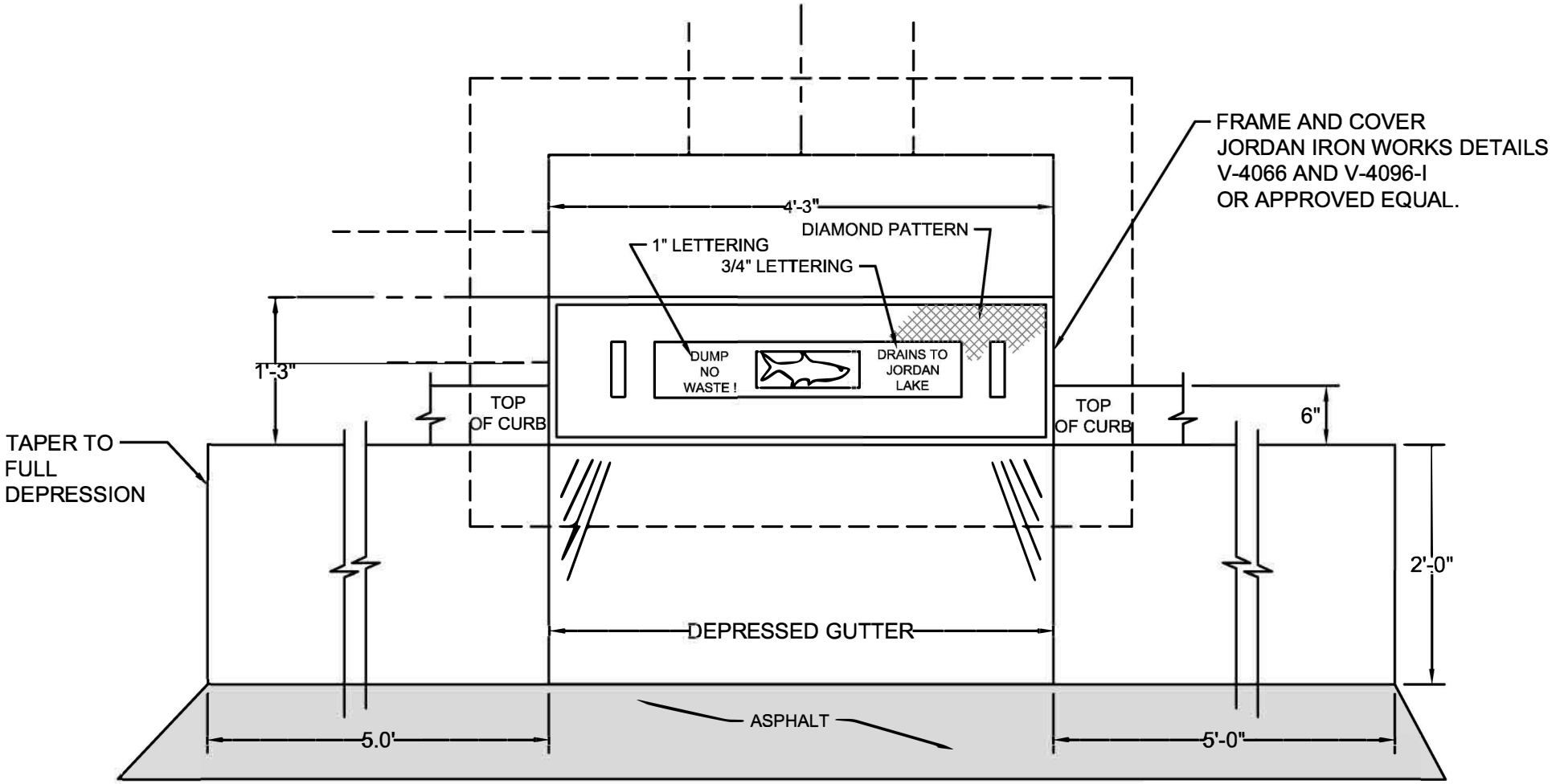
CURB INLET SIDE VIEW

DATE: 02/2017

SW-3.02



NOTES:

1. **ALL STORM DRAIN INLET HOODS AND COVERS INSTALLED OR REPLACED WITHIN THE CHAPEL HILL PLANNING JURISDICTION AFTER JULY 31, 2000 SHALL BE PRE-CAST WITH THE MESSAGE: "DUMP NO WASTE! / DRAINS TO JORDAN LAKE" (INCLUDING THE CAST IMAGE OF A FISH).**

2. **PRE-CAST HOODS AND COVERS SHALL BE DESIGNED IN ACCORDANCE WITH EAST JORDAN IRON WORKS DETAIL V-4066 AND V-4096-1, OR EQUAL, AND MUST COMPLY WITH APPLICABLE STATE AND TOWN REQUIREMENTS FOR MATERIALS AND INSTALLATION.**

3. **THIS DETAIL SUPERCEDED STORM DRAIN: (SD-0.00) DETAILS, AS OF JULY 31, 2000.**

" N O T T O S C A L E "

TOWN OF CHAPEL HILL

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STANDARD DETAIL

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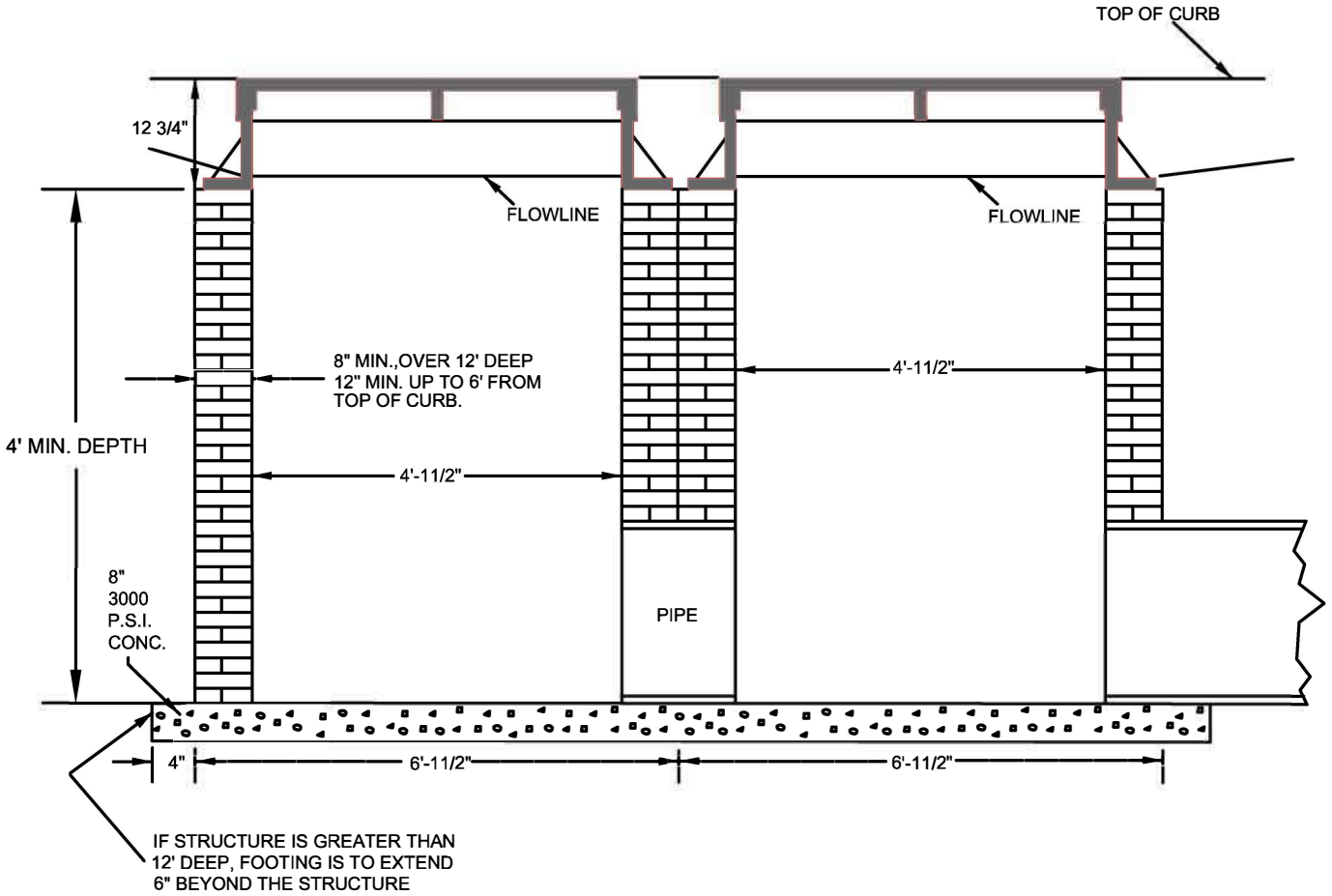
CURB INLET -TOP VIEW

SW-3.03



NOTES:

1. **STEPS SHALL BE INSTALLED IN ALL CATCH BASINS OVER 3' IN DEPTH. DEPTH SHALL BE MEASURED FROM THE TOP OF THE GUTTER TO THE INVERT OF THE CATCH BASIN.**

2. **USE SOLID CONCRETE BRICKS IN 4" X 4" X 16" OR 4" X 8" X 16" SIZES.**

3. **NCDOT APPROVED PRECAST CONCRETE BOXES ACCEPTABLE.**

" N O T T O S C A L E "

TOWN OF CHAPEL HILL

TOWN OF CHAPEL HILL
STANDARD DETAI L

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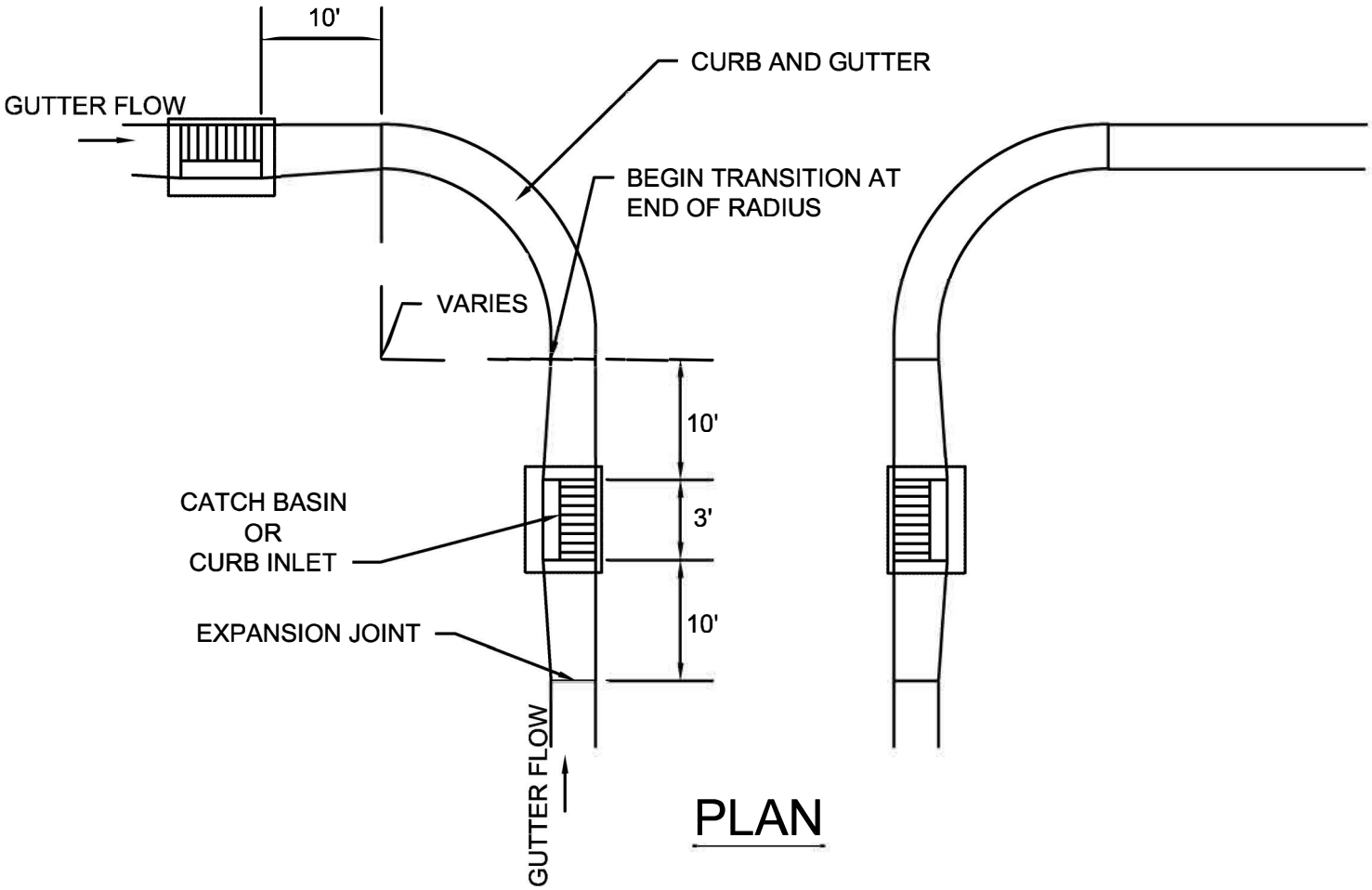
DOUBLE WIDTH CATCH BASIN

DATE: 02/2017

SW-4.00



PLAN

NOTE:

1. **CATCH BASINS MAY BE LOCATED AT END OF RADIUS, IF NOT IN CONFLICT WITH CROSS WALK.**

2. **RADIUS AT INTERSECTION MAY VARY.**

"NOT TO SCALE"

TOWN OF CHAPEL HILL

TOWN OF CHAPEL HILL
STANDARD DETAI L

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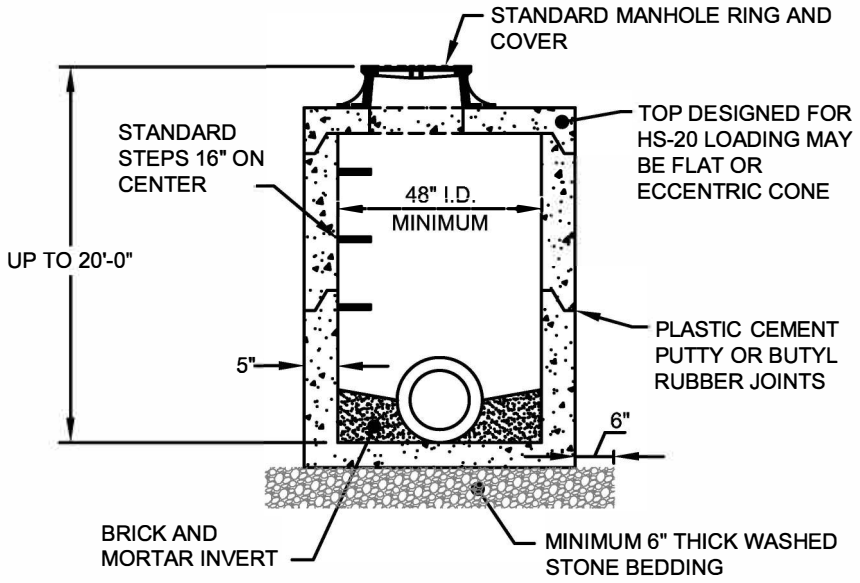
CATCH BASIN PLACEMENT AT INTERSECTIONS

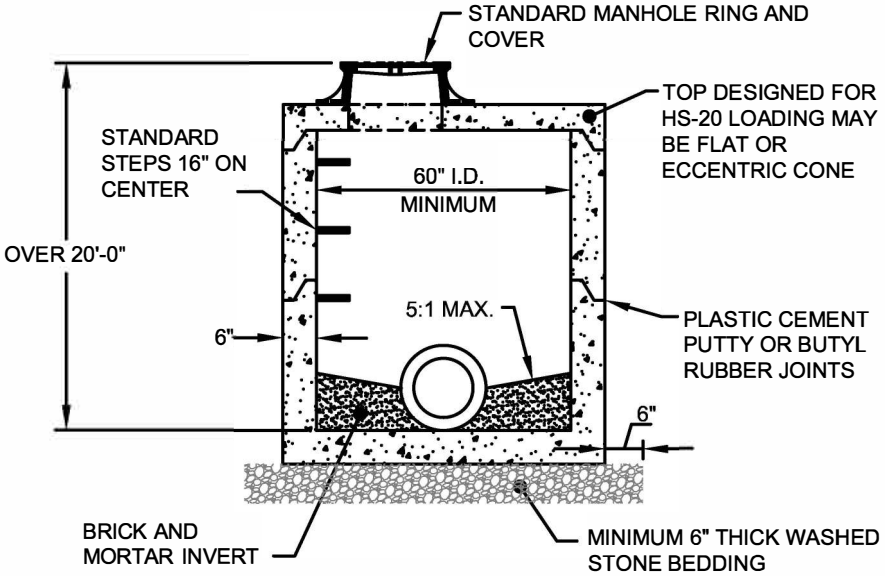
DATE: 02/2017

SW-5.00

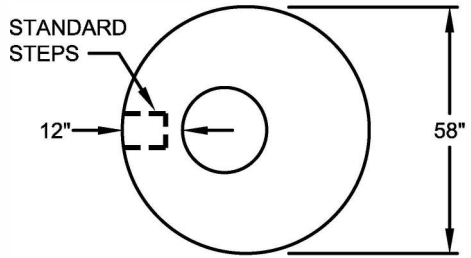
STANDARD TYPE
(UP TO 20 FEET IN DEPTH)



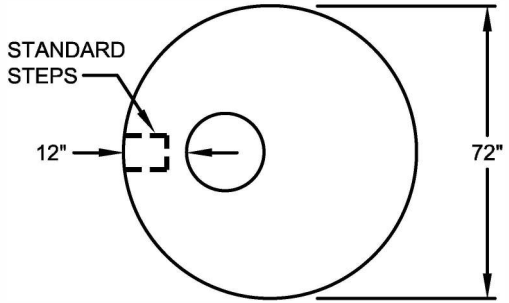
DEEP TYPE
(OVER 20 FEET IN DEPTH)



FLAT TOP DETAIL



FLAT TOP DETAIL



"NOT TO SCALE"

TOWN OF CHAPEL HILL

TOWN OF CHAPEL HILL
STANDARD DETAI L

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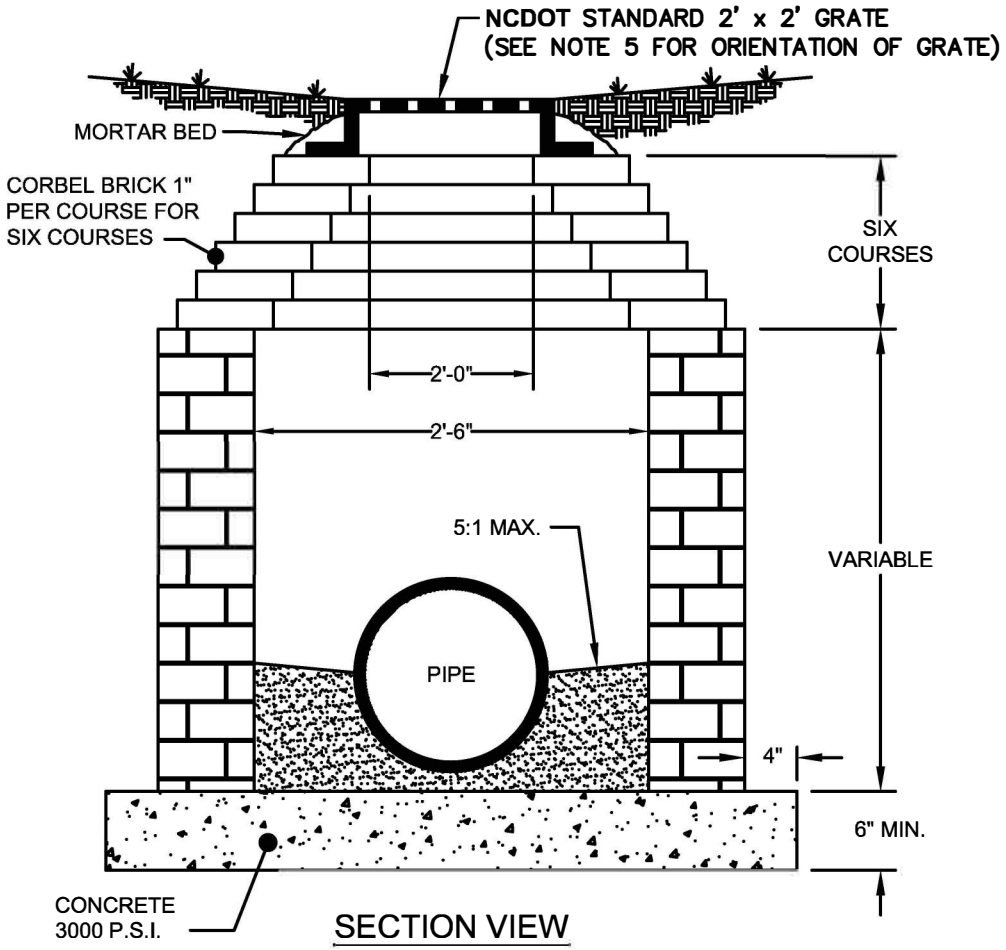
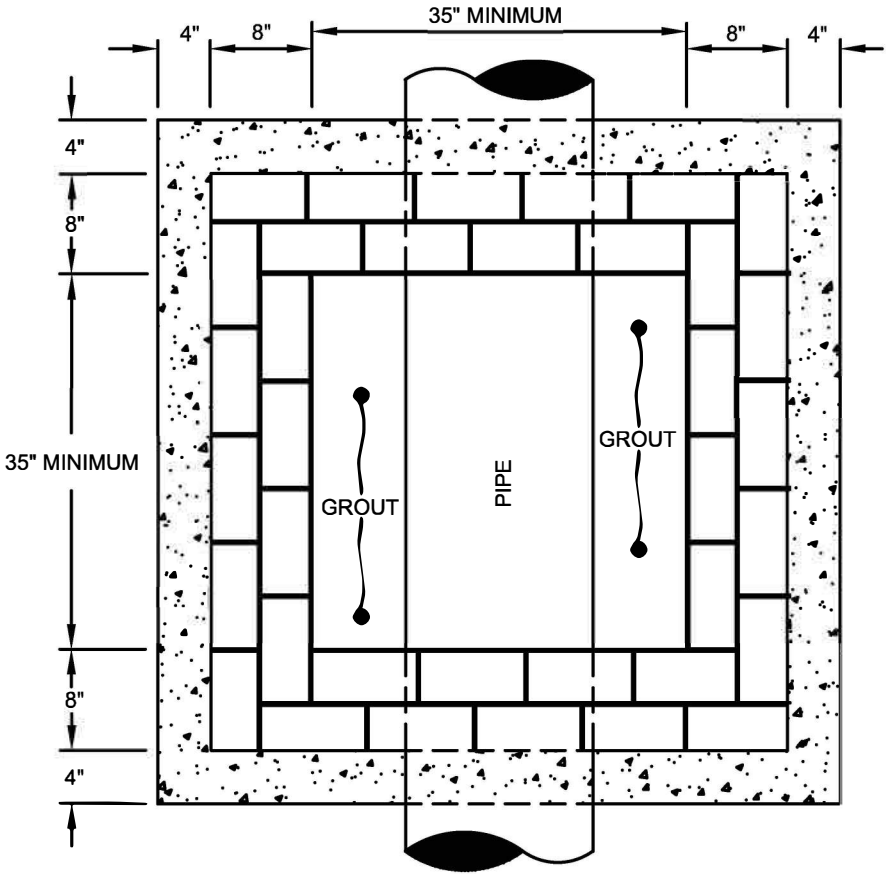
JUNCTION BOX

DATE: 02/2017

SW-6.00



SECTION VIEW



PLAN VIEW

NOTES:

1. EITHER SOLID BRICK, SOLID BLOCK, OR PRECAST CONCRETE MAY BE USED.
2. FOR 24 INCH R.C.P. AND LARGER USE PIPE DIAMETER PLUS 12 INCHES FOR MINIMUM INSIDE DIMENSION.
3. GRATED INLETS SHALL NOT BE USED WITHIN TRAVEL AREAS.
4. STEPS ON CENTER. 1ST STEP IS 2 FEET FROM TOP.
5. WHERE STEPS ARE REQUIRED, USE OF PRECAST CONCRETE SLAB SHALL BE USED AS TOP AND GRATE POSITIONED OVER STEPS.
6. YARD INLETS DEEPER THAN 10 FEET SHALL REQUIRE DOUBLE WALLS.

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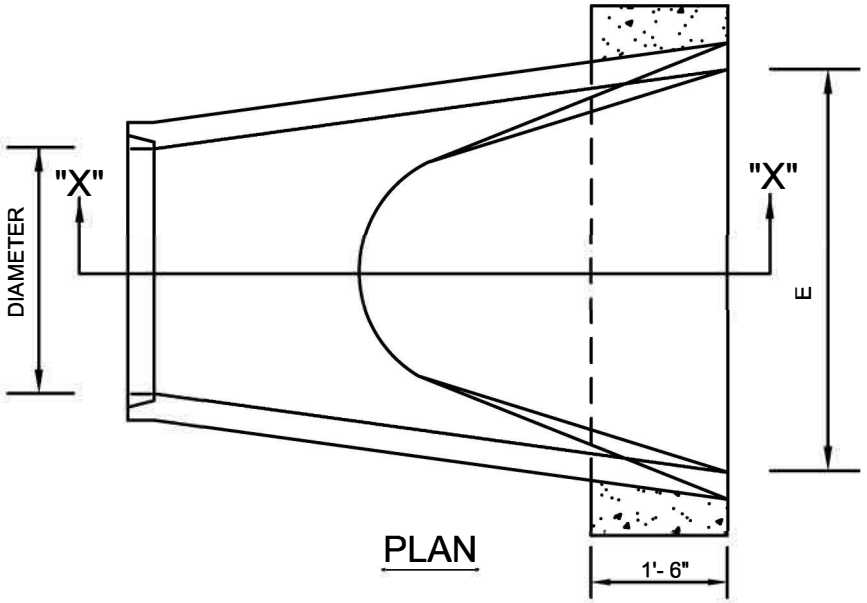
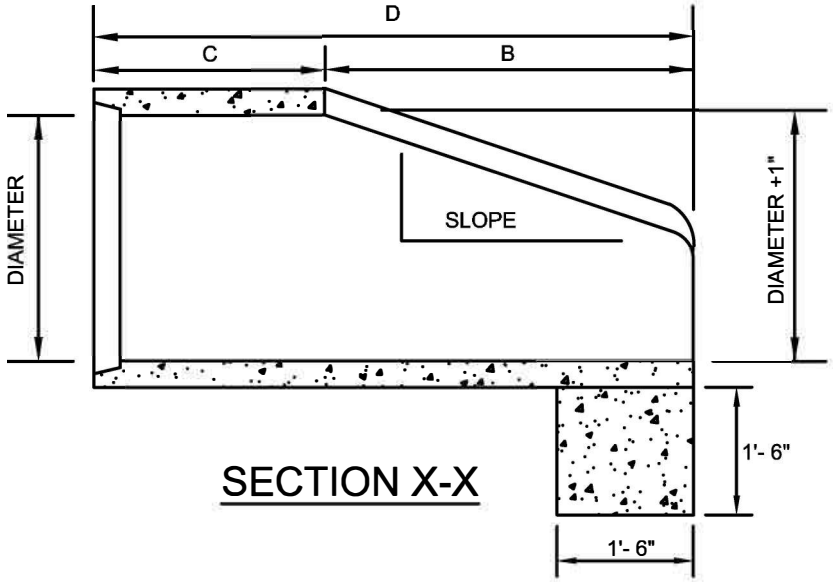
STANDARD YARD INLET WITH GRATE AND FRAME

SW-7.00



PLAN



SECTION X-X

NOTE:

1. STRUCTURAL DESIGN OF END SECTION SHALL CONFORM WITH THAT OF STANDARD REINFORCED CONCRETE.

PIPE DIAMETER	WALL THICKNESS	SLOPE	B	C	D	E	UNIT WEIGHT
12	2 1/4	3:1	24	49	73	24	730
15	2 1/4	3:1	27	46	73	30	910
18	2 1/2	3:1	27	46	73	36	1190
21	2 3/4	3:1	36	37	73	42	1370
24	3	3:1	42	31 1/2	73 1/2	48	1770
27	3 1/4	3:1	48	25 1/2	73 1/2	54	2130
30	3 1/2	3:1	54	19 3/4	73 3/4	60	2380
33	3 3/4	3:1	60	36	96	66	3870
36	4	3:1	63	34 3/4	97 3/4	72	5320
42	4 1/2	3:1	63	35	98	78	5920
48	5	3:1	72	26	98	84	7470
54	5 1/2	2.4:1	66	34	100	90	8810
60	6	2:1	60	39	99	96	11180
72	7	2:1	78	21	99	108	13980

DIMENSIONS IN INCHES WEIGHTS IN POUNDS

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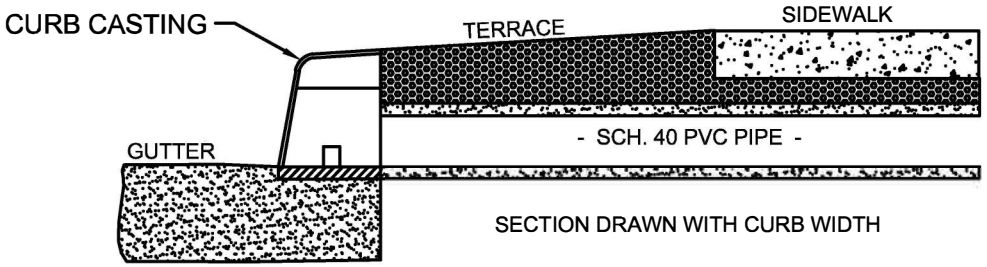
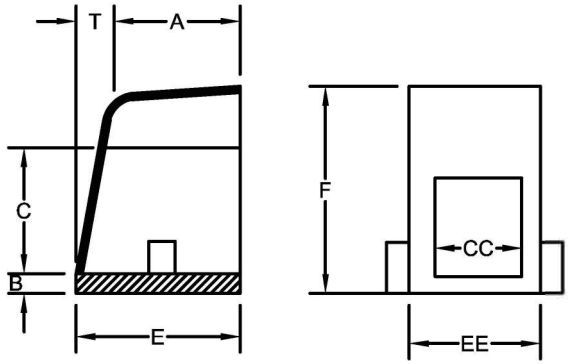
FLARED END SECTION

SW-8.00





TYP. DIMENSIONS (IN INCHES)									WT. LBS.
CAT. NO.	A	B	C	C-C	C-C	E-E	F	T	
R-3262-1	5	0.5	4	4	6	5	7	1	20
R-3262-2	6	0.5	4	4	8.25	5	7	2.25	20
R-3262-3*	5	0.5	4	5.5	6	6.5	6.5	1	20
R-3262-4	5	0.5	4	16	7	17	6.375	2	45
R-3262-6	6	0.5	6	6	8	7.25	9	2	30

* 4" ID OUTLET IS OPTIONAL

** NEENAN ENTERPRISIES INC. R-3262 OR APPROVED EQUAL

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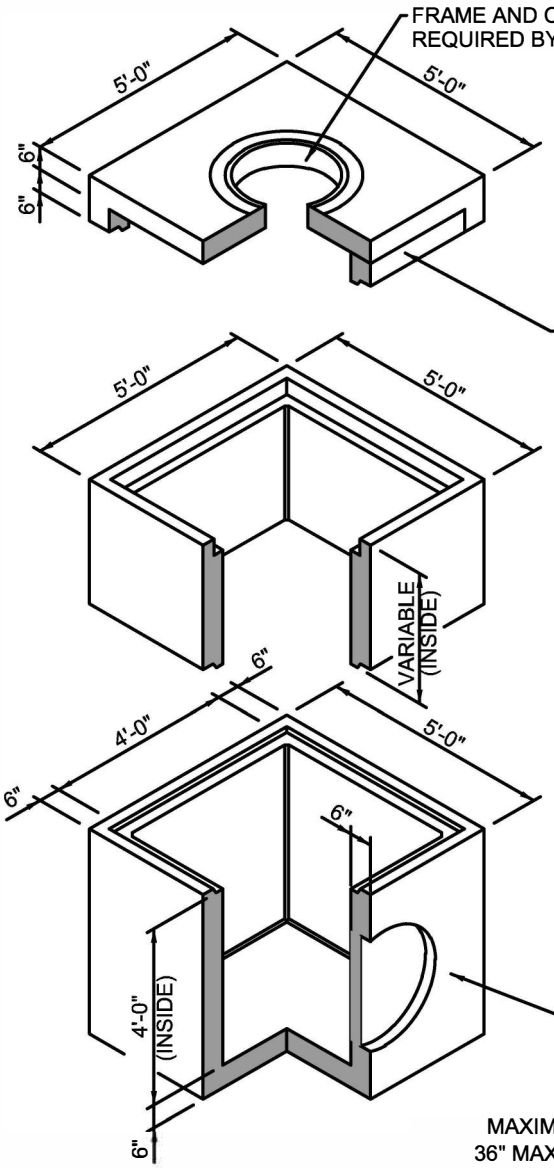
STORM WATER CURB OPENINGS

SW-9.00



MAXIMUM WIDTH OPENING IS 48" WITH
36" MAXIMUM WIDTH IN ADJACENT WALL.

OLD CASTLE Y44-INL6

"NOT TO SCALE"

** SHOWN WITH EAST JORDAN IRON WORKS FLUSH MOUNT MANHOLE FOR USE WITH ALL YARD INLETS.

** USE OLD CASTLE Y44-INL6 OR EQUAL

NOTE:

1. ALL CONCRETE SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF 4500 psi.
2. REINFORCING STEEL SHALL COMPLY WITH ASTM A615 GRADE 60, A706 GRADE 60 OR A497 GRADE 70. BAR BENDING AND PLACEMENT SHALL COMPLY WITH THE LATEST ACI STANDARDS.
3. WATER TABLE IS AT 3'-0" BELOW GRADE FOR STANDARD STRUCTURAL DESIGN.
4. THE STANDARD DESIGN IS BASED ON THE TOP AT GRADE AND THE BASE AT 8'-0" MAX. BELOW GRADE.
5. THE STRUCTURE SHALL BE PLACED ON A COMPACTED GRANULAR BASE TO INSURE UNIFORM DISTRIBUTION OF SOIL PRESSURES.
6. SPECIAL DESIGNS BASED ON OTHER LOADINGS OR DEEPER INSTALLATION DEPTHS ARE AVAILABLE ON REQUEST.
7. KNOCKOUTS OR PIPE OPENINGS OR CAN BE PROVIDED IN THE SIZE AND LOCATIONS REQUIRED.

WITH 6" THROAT OPENING
4'-0"x4'-0" -Y- INLET

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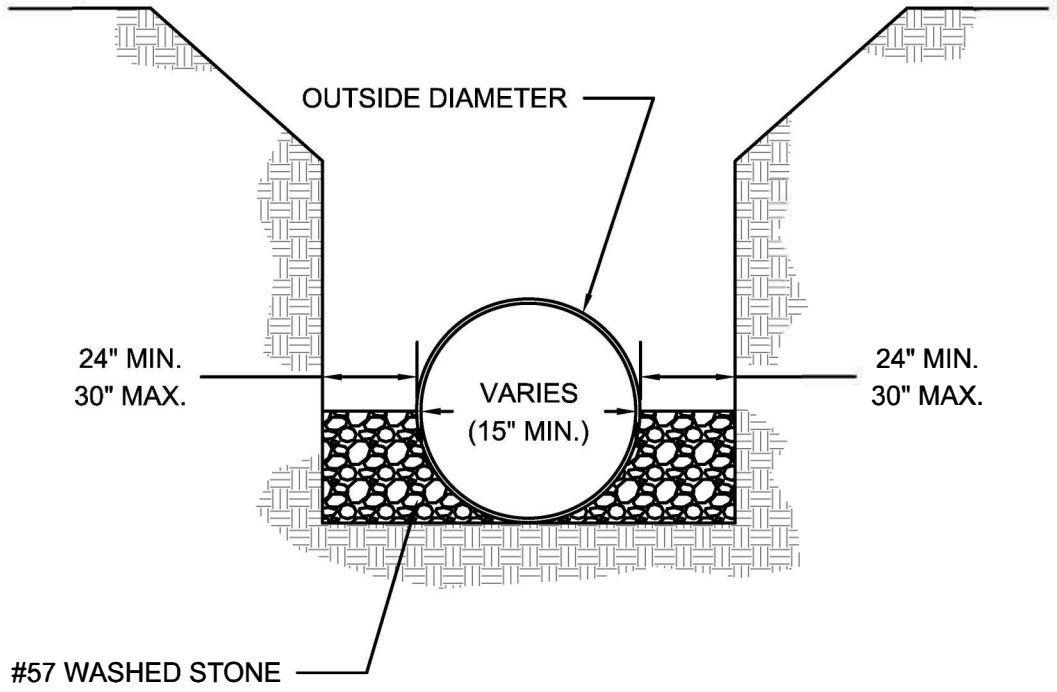
YARD INLET OPEN THROAT

SW-10.00



NOTE:

1. **A MINIMUM OF 24" FROM OUTSIDE DIAMETER OF PIPE TO SIDE OF TRENCH MUST BE ALLOWED FOR COMPACTION OF FILL MATERIAL. BACKFILLING OF TRENCHES SHALL BE ACCOMPLISHED IMMEDIATELY AFTER THE PIPE IS LAID THE FILL AROUND THE PIPE SHALL BE PLACED IN LAYERS NOT TO EXCEED 6". UNDER NO CIRCUMSTANCES SHALL WATER BE PERMITTED TO RISE IN UNBACKFILLED TRENCHES AFTER THE PIPE HAS BEEN PLACED. COMPACTION REQUIREMENTS SHALL BE ATTAINED BY THE USE OF THE MECHANICAL TAMPS ONLY. EACH AND EVERY LAYER OF BACKFILL SHALL BE PLACED LOOSE AND THOROUGHLY COMPACTED INTO PLACE.**

2. **ALL BACKFILL MATERIALS SHALL HAVE AN IN PLACE COMPACTED DENSITY OF 95% OF STANDARD PROCTOR THE FINAL 2' BELOW FINISHED GRADE SHALL BE 98%.**

3. **ALL TRENCH OPERATIONS SHALL MEET OSHA STANDARDS.**

4. **BACKFILL MATERIAL BENEATH ROADWAY SHALL BE SELECT BACKFILL MATERIAL.**

5. **HAUNCHING SHALL BE WITH #57 OR #67 WASHED STONE UNLESS OTHERWISE APPROVED BY THE ENGINEERING INSPECTOR.**

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TRENCH DETAIL FOR STORM DRAIN PIPES

SW-11.00

EASEMENT REQUIREMENTS FOR STORM DRAIN PIPE	
PIPE SIZE	EASEMENT REQUIREMENT
15"	20'
18"	20'
24"	20'
30"	30'
36"	30'
42"	30'
48"	30'
54" +	30' MIN. (VARIES)

NOTES:

1. FOR OPEN CHANNEL, THE MINIMUM EASEMENT MUST CONTAIN THE WIDTH OF THE STREAM FROM TOP OF BANK. PLUS 10' ON EACH SIDE OF THE BANK.

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MINIMUM DRAINAGE EASEMENT REQIREMENTS FOR STORM DRAIN PIPES AND OPEN CHANNELS

SW-12.00

NOTES:

1. DETECTABLE WARNING DOMES SHALL COVER 2'-0" IN LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON DETAIL 03000.14, SHEETS 1 & 2. THE RAMP MAY BE YELLOW IN COLOR OR ANY COLOR WITH A 70% CONTRAST RATIO.

2. CROSSWALK WIDTHS AND CONFIGURATION VARY BUT MUST CONFORM TO TRAFFIC DESIGN STANDARDS.

3. NORTH CAROLINA GENERAL STATUTE 136-44.14 REQUIRES THAT ALL STREET CURBS BEING CONSTRUCTED OR RECONSTRUCTED FOR MAINTENANCE PROCEDURES, TRAFFIC OPERATIONS, REPAIRS, CORRECTION OF UTILITIES OR ALTERED FOR ANY REASON AFTER SEPTEMBER 1, 1973 SHALL PROVIDE WHEELCHAIR RAMPS FOR THE PHYSICALLY DISABLED AT ALL INTERSECTIONS WHERE BOTH CURB AND GUTTER AND SIDEWALKS ARE PROVIDED AND AT OTHER POINTS OF PEDESTRIAN FLOW.
   IN ADDITION, SECTION 228 OF THE 1973 FEDERAL AID HIGHWAY SAFETY ACT REQUIRES PROVISION OF CURB RAMPS ON ANY CURB CONSTRUCTION AFTER JULY 1, 1976 WHETHER A SIDEWALK IS PROPOSED INITIALLY OR IS PLANNED FOR A FUTURE DATE.
   THE AMERICANS WITH DISABILITIES ACT (ADA) OF 1990 EXTENDS TO INDIVIDUALS WITH DISABILITIES. COMPREHENSIVE CIVIL RIGHTS PROTECTIONS SIMILAR TO THOSE PROVIDED TO PERSONS ON THE BASIS OF RACE, SEX, NATIONAL ORIGIN AND RELIGION UNDER THE CIVIL RIGHTS ACT OF 1964. THESE CURB RAMPS HAVE BEEN DESIGNED TO COMPLY WITH THE CURRENT ADA STANDARDS.

4. PROVIDE WHEELCHAIR RAMPS AT LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. LOCATE WHEELCHAIR RAMPS AS DIRECTED BY THE ENGINEER WHERE EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC. AFFECT PLACEMENT. WHERE TWO RAMPS ARE INSTALLED PLACE NOT LESS THAN 2 FEET OF FULL HEIGHT CURB BETWEEN THE RAMPS. PLACE DUAL RAMPS AS NEAR PERPENDICULAR TO THE TRAVEL LANE BEING CROSSED AS POSSIBLE.

5. PAY FOR ALL VARIABLE DEPTH CONCRETE USED FOR CONSTRUCTION OF WHEELCHAIR RAMPS AS CONCRETE WHEELCHAIR RAMPS. (SQ. YDS.)

6. PAY FOR ALL DEPRESSED CURBS AT WHEELCHAIR RAMPS AS THE TYPE CURB AND GUTTER USED ADJACENT TO DEPRESSED CURB. (LN. FT.)

7. SUCH PRICES AND PAYMENTS IS CONSIDERED FULL COMPENSATION FOR ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO SATISFACTORILY COMPLETE THE WORK.

8. DO NOT EXCEED 0.08 (12:1) SLOPE ON THE WHEELCHAIR RAMP IN RELATIONSHIP TO THE GRADE OF THE STREET.

9. CONSTRUCT WHEELCHAIR RAMPS 40" (3'-4") OR GREATER FOR DUAL RAMPS AND 60" (5'-0") OR GREATER FOR DIAGONAL RAMPS.

10. USE CLASS "B" CONCRETE WITH A SIDEWALK FINISH IN ORDER TO OBTAIN A ROUGH NON-SKID TYPE SURFACE.

11. PLACE A ½" EXPANSION JOINT WHERE THE CONCRETE WHEELCHAIR RAMP JOINS THE CURB AND AS SHOWN ON STANDARD DETAIL 03000.07.

12. PLACE THE INSIDE PEDESTRIAN CROSSWALK LINES NO CLOSER IN THE INTERSECTION BY BISECTING THE INTERSECTION RADII, WITH ALLOWANCE OF A 4' CLEAR ZONE IN THE VEHICULAR TRAVELWAY WHEN ONE RAMP IS INSTALLED (SEE NOTE 17).

13. COORDINATE THE CURB CUT AND THE PEDESTRIAN CROSSWALK LINES SO THE FLOOR OF THE WHEELCHAIR RAMP WILL FALL WITHIN THE PEDESTRIAN CROSSWALK LINES. PLACE DIAGONAL RAMPS WITH FLARED SIDES SO 24" OF FULL HEIGHT CURB FALLS WITHIN THE CROSSWALK MARKINGS ON EACH SIDE OF THE FLARES.

14. CONSTRUCT THE PEDESTRIAN CROSSWALK A MINIMUM OF 6 FEET. A CROSSWALK WIDTH OF 10 FEET OR GREATER IS DESIRABLE.

15. USE STOP LINES, NORMALLY PERPENDICULAR TO THE LANE LINES, WHERE IT IS IMPORTANT TO INDICATE THE POINT BEHIND WHICH VEHICLES ARE REQUIRED TO STOP IN COMPLIANCE WITH A TRAFFIC SIGNAL, STOP SIGN OR OTHER LEGAL REQUIREMENT. AN UNUSUAL APPROACH SKEW MAY REQUIRE THE PLACEMENT OF THE STOP LINE TO BE PARALLEL TO THE INTERSECTING ROADWAY.

16. TERMINATE PARKING A MINIMUM OF 20 FEET BACK OF PEDESTRIAN CROSSWALK.

17. PLACE ALL PAVEMENT MARKINGS IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION AND THE NORTH CAROLINA SUPPLEMENT TO THE MUTCD.

18. FROM DETECTABLE WARNING DOME PORTION ALL THE WAY TO BACK EDGE OF SIDEWALK NEEDS TO BE BLACK.

19. WHEELCHAIR RAMPS SHOULD BE CONSTRUCTED ACCORDING TO TOC & NCDOT STANDARDS AFTER THE LOCATIONS OF THE PROPOSED STOP BAR AND/OR PEDESTRIAN CROSSWALKS HAVE BEEN STAKED OUT.

20. LADDER-STYLE & DIAGONAL CROSSWALK STRIPING ARE NOT PERMISSIBLE.

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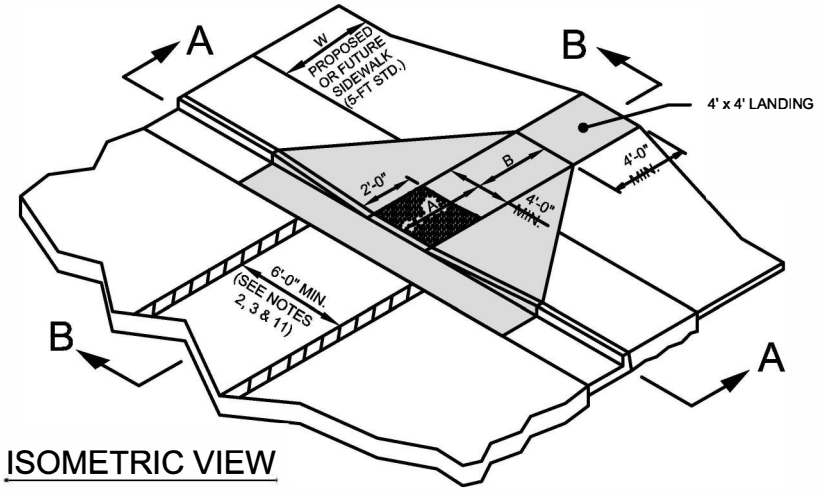
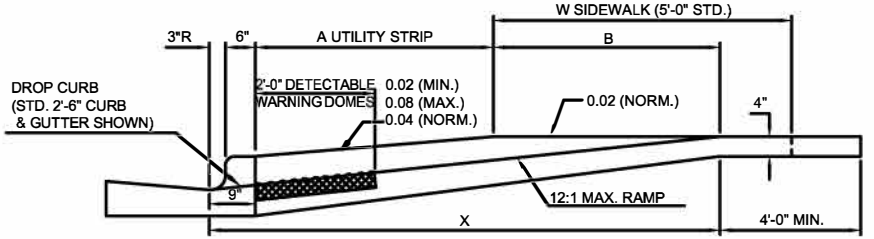
ACCESSIBLE RAMP NOTES

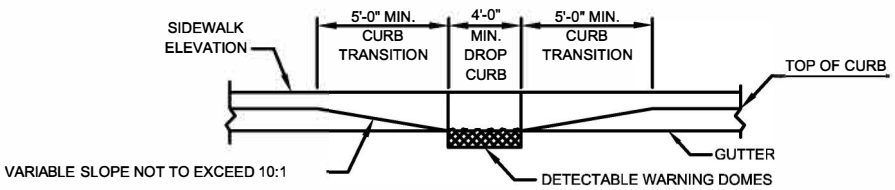
T-1.01



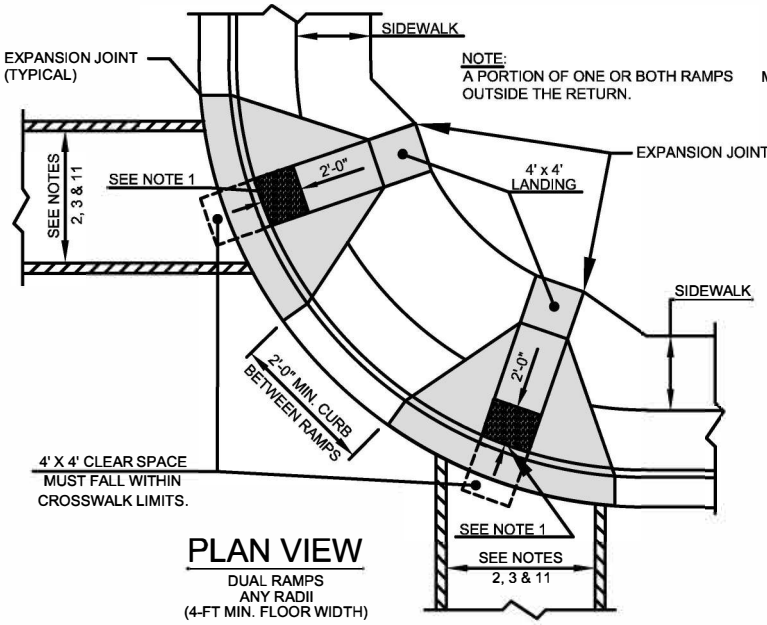
ISOMETRIC VIEW



SECTION B-B



SECTION A-A



PLAN VIEW

DUAL RAMPS
ANY RADII
(4-FT MIN. FLOOR WIDTH)

PAY LIMITS FOR CURB RAMP

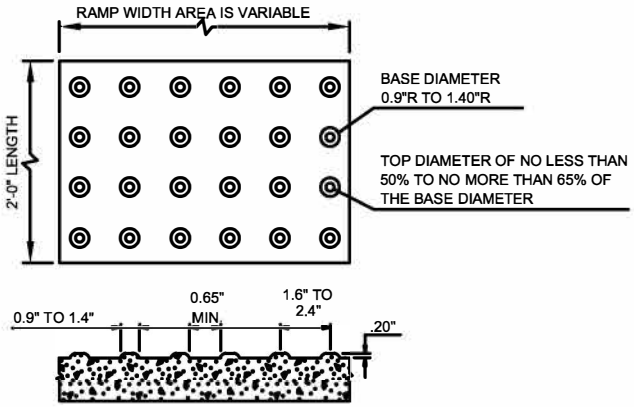
W	A	W+A+9"	X	B
5'	0.0'	5.8'	5.8'	5.0"*
6'	0.0'	6.8'	6.8'	6.0"**
7'	0.0'	7.8'	7.3'	6.5"**
8'	0.0'	8.8'	7.3'	6.5"**
5'	2.0'	7.8'	7.8'	5.0'
5'	2.5'	8.3'	8.1'	4.8'
5'	3.0'	8.8'	8.3'	4.4'
5'	3.5'	9.3'	8.4'	4.1'
5'	4.0'	9.8'	8.6'	3.8'
5'	4.5'	10.3'	8.7'	3.4'
5'	5.0'	10.8'	8.9'	3.1'

B = X-(A+9")

B = DISTANCE FROM FRONT EDGE OF SIDEWALK TO BACK POINT OF 12:1 (8.33%) SLOPE.

* BACK OF SIDEWALK DROP REQUIRED FOR ALL SIDEWALK SLOPES.

** BACK OF SIDEWALK DROP REQUIRED FOR SIDEWALK SLOPES 0.04.



DETECTABLE WARNING DOMES

NOTES:

1. **DETECTABLE WARNING DOMES WILL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.**
2. **DETECTABLE WARNING DOMES WILL CONTRAST VISIBILITY WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.**

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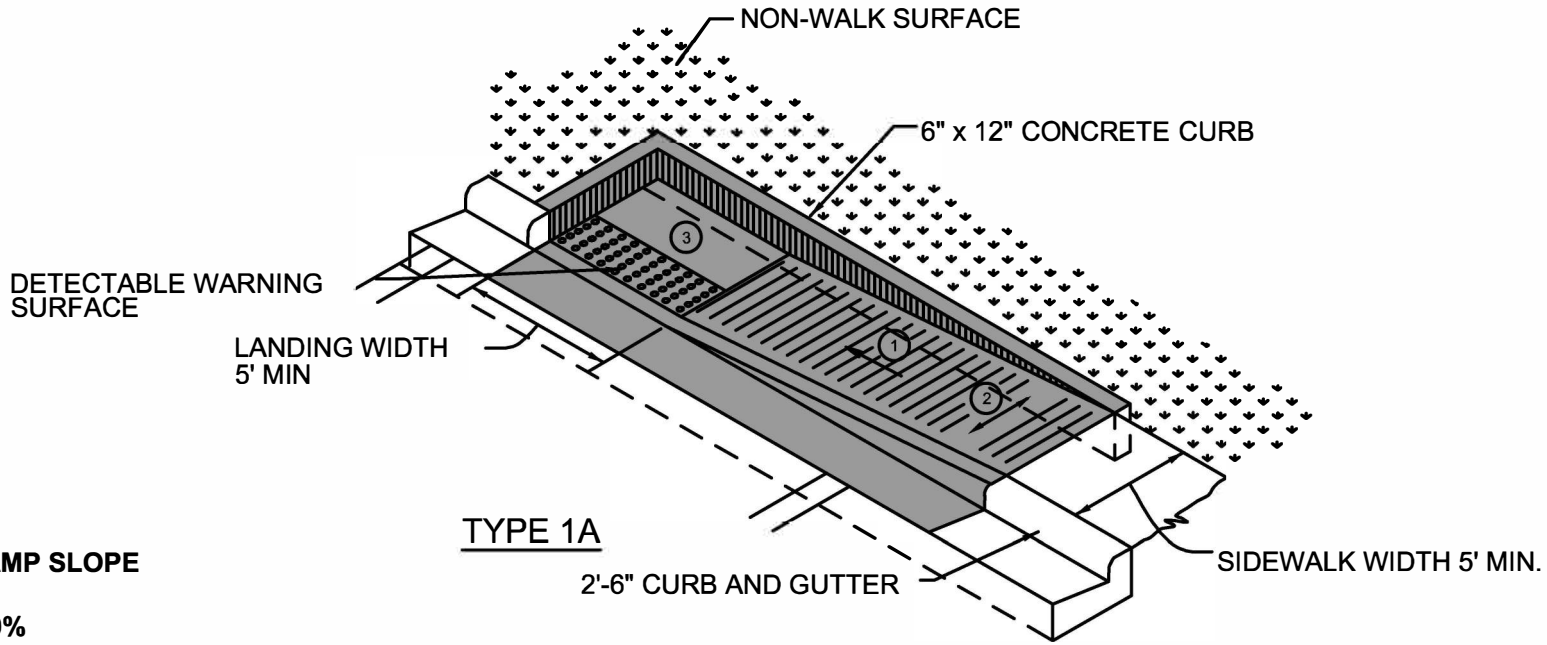
ACCESSIBLE RAMP

T-1.02

CONCRETE DEPTH	
RAMP	4"
LANDING	4"



TYPE 1A

NOTE:

1. **8.33% (12:1) MAX RAMP SLOPE**
2. **CROSS SLOPE: 2.00%**
3. **CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.**
4. **CONSTRUCT THE WINGS (X) WITH A CURB FACE SLOPE 12:1 OR HIGHER.**
5. **PLACE TRUNCATED DOME FINISH ON THE RAMP PARALLEL WITH THE CURB.**
6. **PLACE CONTRACTION JOINTS AND EXPANSION JOINTS SCORELINES AS SHOWN.**
7. **OPTIONAL BACKING CURB FOR LANDSCAPE SUPPORT.**

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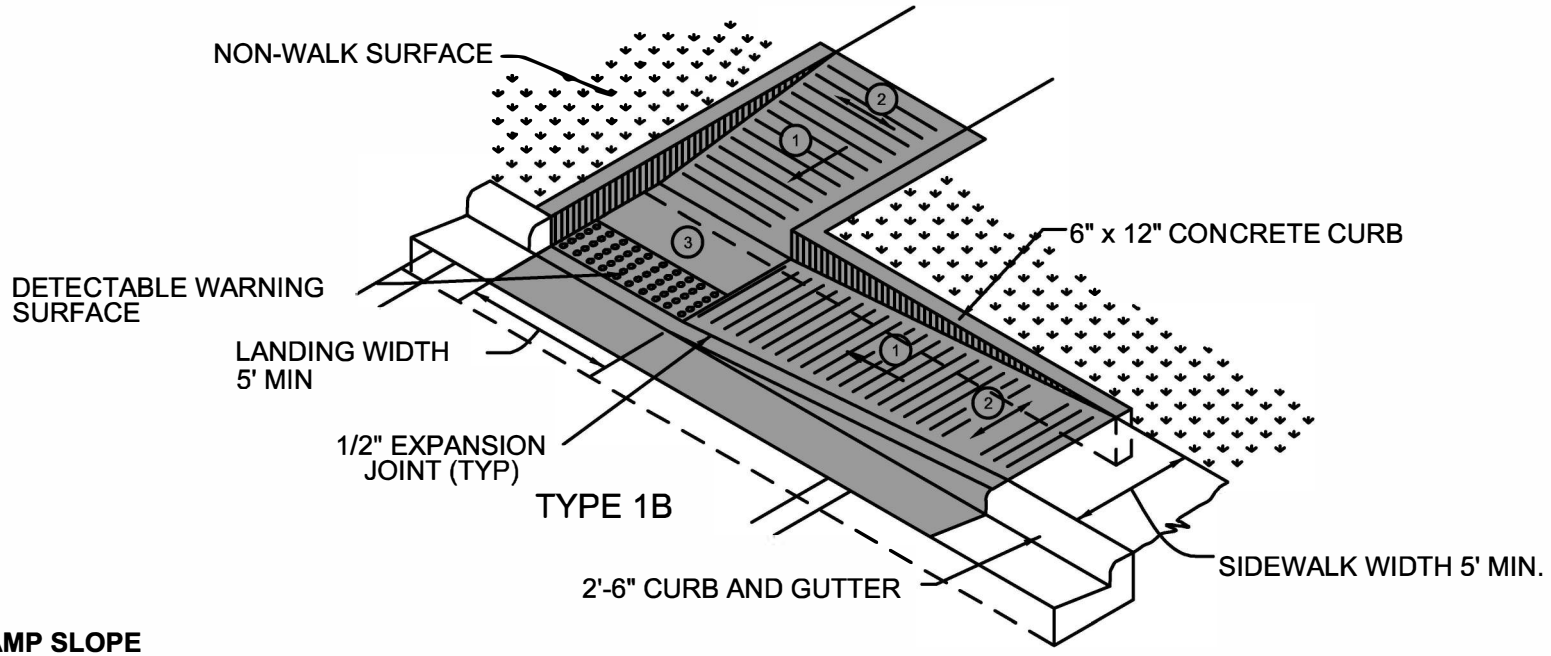
CURB RAMP
TYPE 1A

T-2.01



CONCRETE DEPTH	
RAMP	4"
LANDING	4"

NOTE:

1. **8.33% (12:1) MAX RAMP SLOPE**
2. **CROSS SLOPE: 2.00%**
3. **CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.**
4. **CONSTRUCT THE WINGS (X) WITH A CURB FACE SLOPE 12:1 OR HIGHER.**
5. **PLACE TRUNCATED DOME FINISH ON THE RAMP PARALLEL WITH THE CURB.**
6. **PLACE CONTRACTION JOINTS AND EXPANSION JOINTS SCORELINES AS SHOWN.**
7. **OPTIONAL BACKING CURB FOR LANDSCAPE SUPPORT.**

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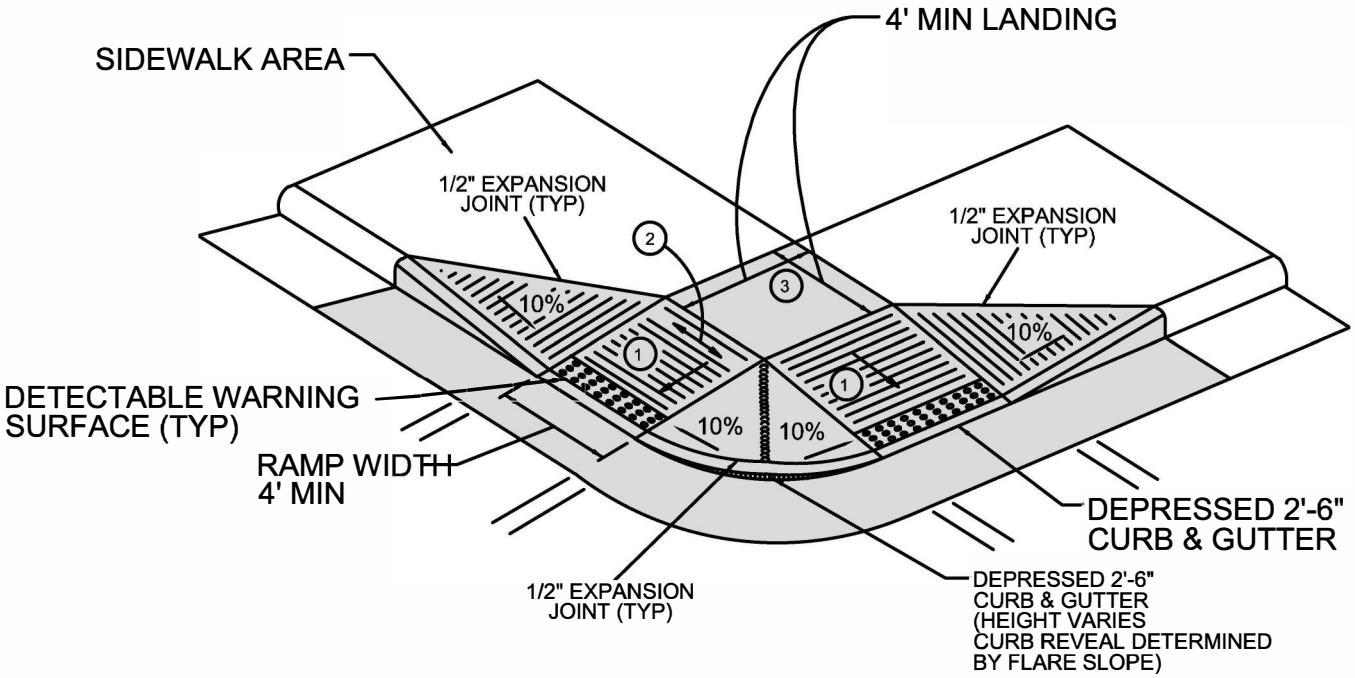
CURB RAMP TYPE 1B

T-2.02



CONCRETE DEPTH	
RAMP / FLARE	6"
LANDING	4"

TYPE 2A
(COMMERCIAL/RETAIL USE)

NOTE:

1. **8.33% (12:1) MAX RAMP SLOPE**
2. **CROSS SLOPE: 2.00%**
3. **CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.**
4. **CONSTRUCT THE WINGS (X) WITH A CURB FACE SLOPE 12:1 OR HIGHER.**
5. **PLACE TRUNCATED DOME FINISH ON THE RAMP PARALLEL WITH THE CURB.**
6. **PLACE CONTRACTION JOINTS AND EXPANSION JOINTS SCORELINES AS SHOWN.**
7. **OPTIONAL BACKING CURB FOR LANDSCAPE SUPPORT.**

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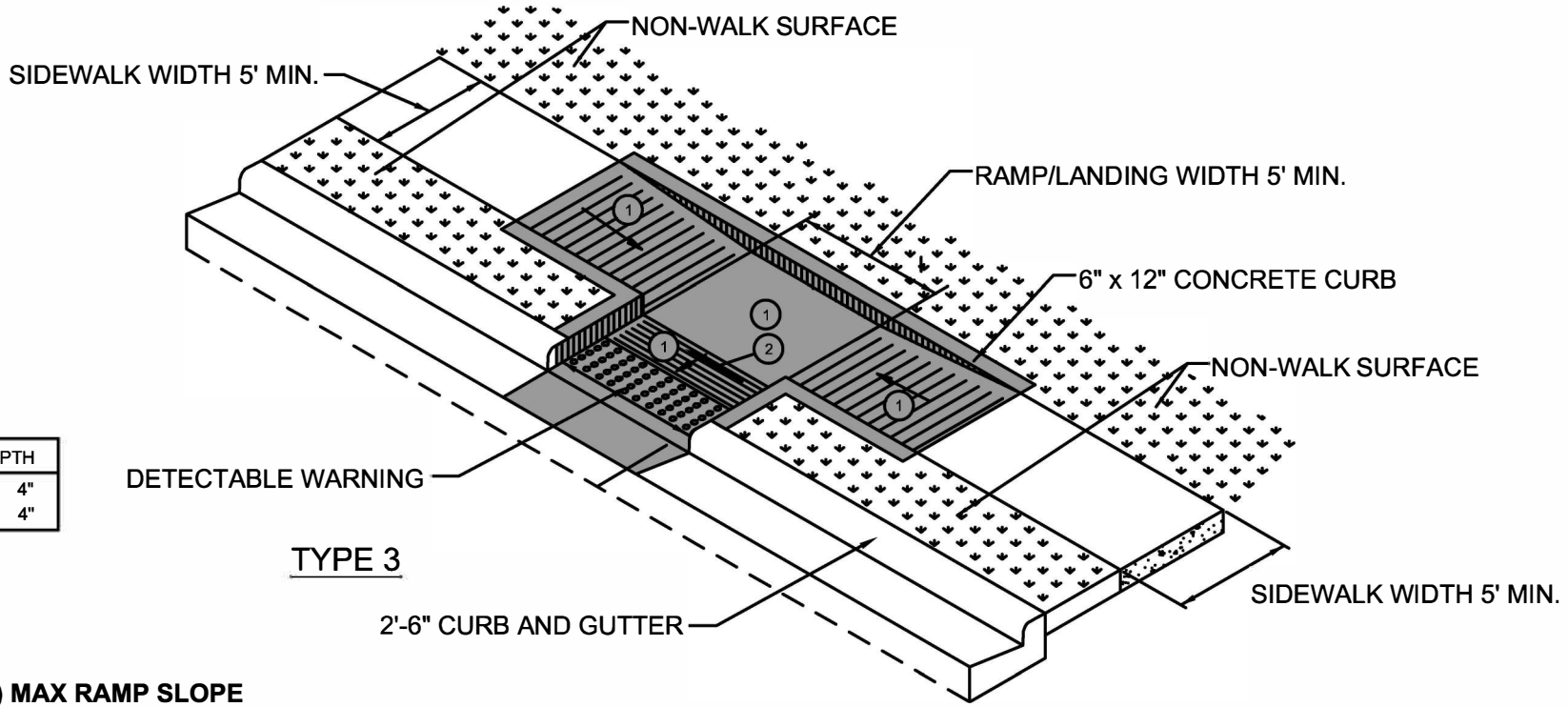
CURB RAMP TYPE 2A

T-2.03



CONCRETE DEPTH	
RAMP	4"
LANDING	4"

TYPE 3

NOTE:

1. **8.33% (12:1) MAX RAMP SLOPE**
2. **CROSS SLOPE: 2.00%**
3. **CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.**
4. **CONSTRUCT THE WINGS (X) WITH A CURB FACE SLOPE 12:1 OR HIGHER.**
5. **PLACE TRUNCATED DOME FINISH ON THE RAMP PARALLEL WITH THE CURB.**
6. **PLACE CONTRACTION JOINTS AND EXPANSION JOINTS SCORELINES AS SHOWN.**
7. **OPTIONAL BACKING CURB FOR LANDSCAPE SUPPORT.**

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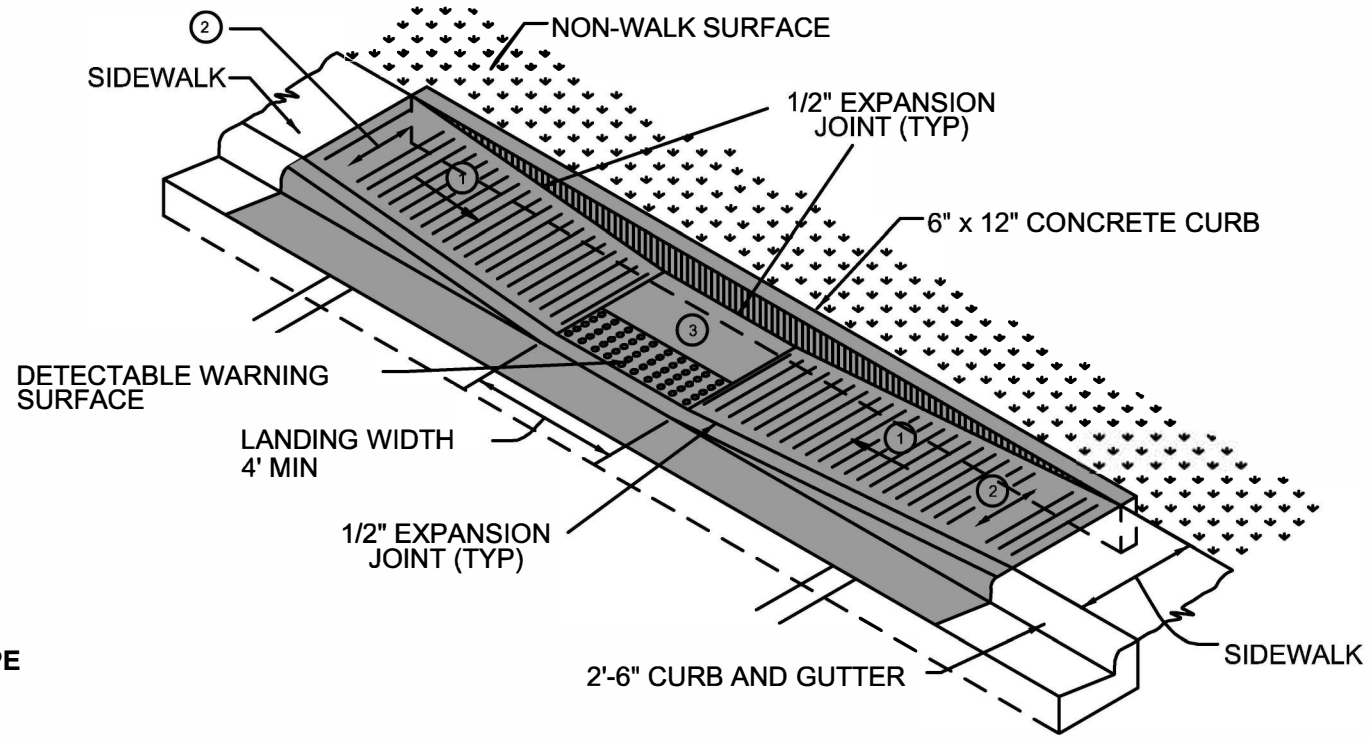
CURB RAMP
TYPE 3

T-2.04



CONCRETE DEPTH	
RAMP	4"
LANDING	4"

NOTE:

1. **8.33% (12:1) MAX RAMP SLOPE**
2. **CROSS SLOPE: 2.00%**
3. **CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.**
4. **CONSTRUCT THE WINGS (X) WITH A CURB FACE SLOPE 12:1 OR HIGHER.**
5. **PLACE TRUNCATED DOME FINISH ON THE RAMP PARALLEL WITH THE CURB.**
6. **PLACE CONTRACTION JOINTS AND EXPANSION JOINTS SCORELINES AS SHOWN.**
7. **OPTIONAL BACKING CURB FOR LANDSCAPE SUPPORT.**

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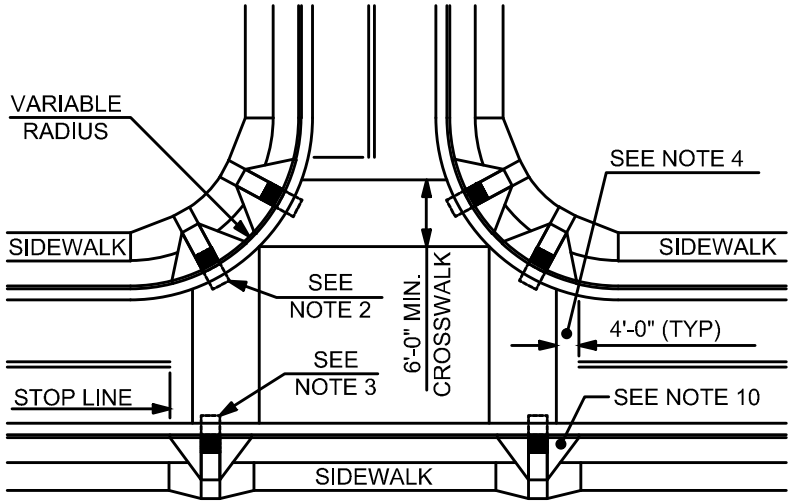
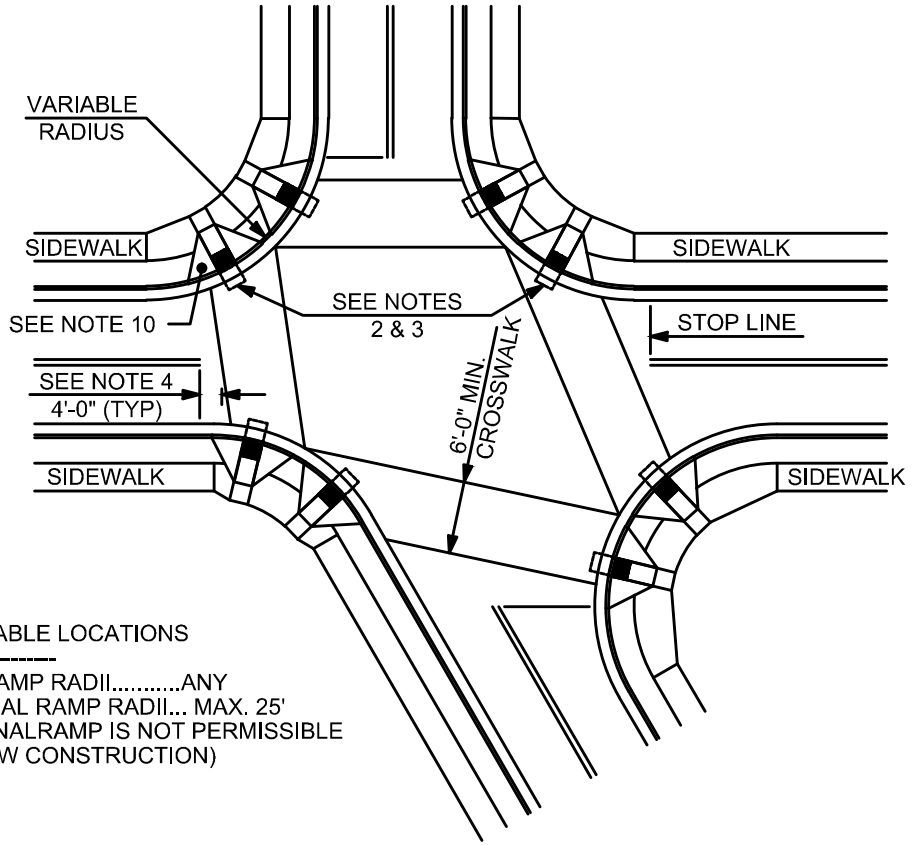
MID-BLOCK CURB RAMP

T-2.05



DETAIL SHOWING TYPICAL LOCATION OF CURB RAMPS, PEDESTRIAN CROSSWALKS AND STOP LINES FOR TEE INTERSECTIONS



ALLOWABLE LOCATIONS

DUAL RAMP RADII.....ANY
DIAGONAL RAMP RADII... MAX. 25'
(DIAGONALRAMP IS NOT PERMISSIBLE
FOR NEW CONSTRUCTION)

DETAIL SHOWING TYPICAL LOCATION OF CURB RAMPS, PEDESTRIAN CROSSWALKS AND STOP LINES

ROADWAY
PLAN SYMBOL
CR
FOR PROPOSED
CURB RAMP

PROPOSED CURB RAMP W/ LANDING

PROPOSED OR FUTURE SIDEWALK

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ACCESSIBLE RAMP

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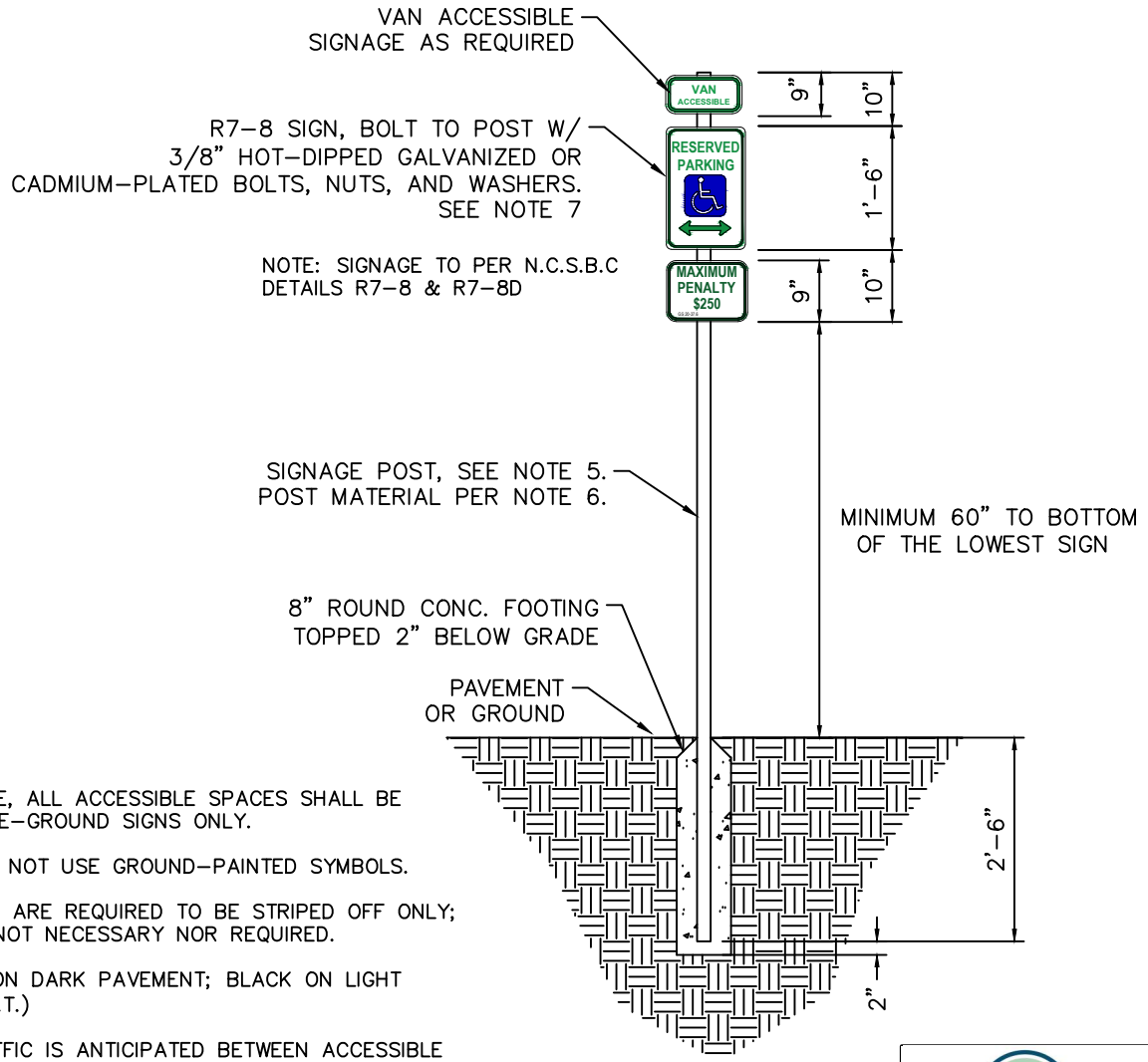
T-2.06



GENERAL NOTES:

1. REGARDLESS OF AGE, ALL ACCESSIBLE SPACES SHALL BE IDENTIFIED BY ABOVE-GROUND SIGNS ONLY.
2. NEW SPACES SHALL NOT USE GROUND-PAINTED SYMBOLS.
3. ACCESSIBLE SPACES ARE REQUIRED TO BE STRIPED OFF ONLY; BLUE COLORING IS NOT NECESSARY NOR REQUIRED.
4. STRIPING IS WHITE ON DARK PAVEMENT; BLACK ON LIGHT PAVEMENT. (N.C.D.O.T.)
5. IF PEDESTRIAN TRAFFIC IS ANTICIPATED BETWEEN ACCESSIBLE PARKING SPACE AND PARKING SIGNAGE, MINIMUM HEIGHT OF SIGNAGE SHALL BE 7-FT.
6. SIGNS SHALL BE MOUNTED ON ALUMINUM OR GALVANIZED STEEL POST. POST SHALL BE EITHER 2" SQUARE OR 2" WIDE (MIN.) U-CHANNEL (1" CHANNEL DEPTH MIN.)
7. USE ISOLATION WASHERS IF BOLTS ARE DISSIMILAR METAL THAN SIGN POST. ISOLATION WASHERS SHALL BE MADE OF PHOTODEGRADATION-RESISTANT MATERIAL, SUCH AS BLACK NEOPRENE, EPDM OR HDPE.

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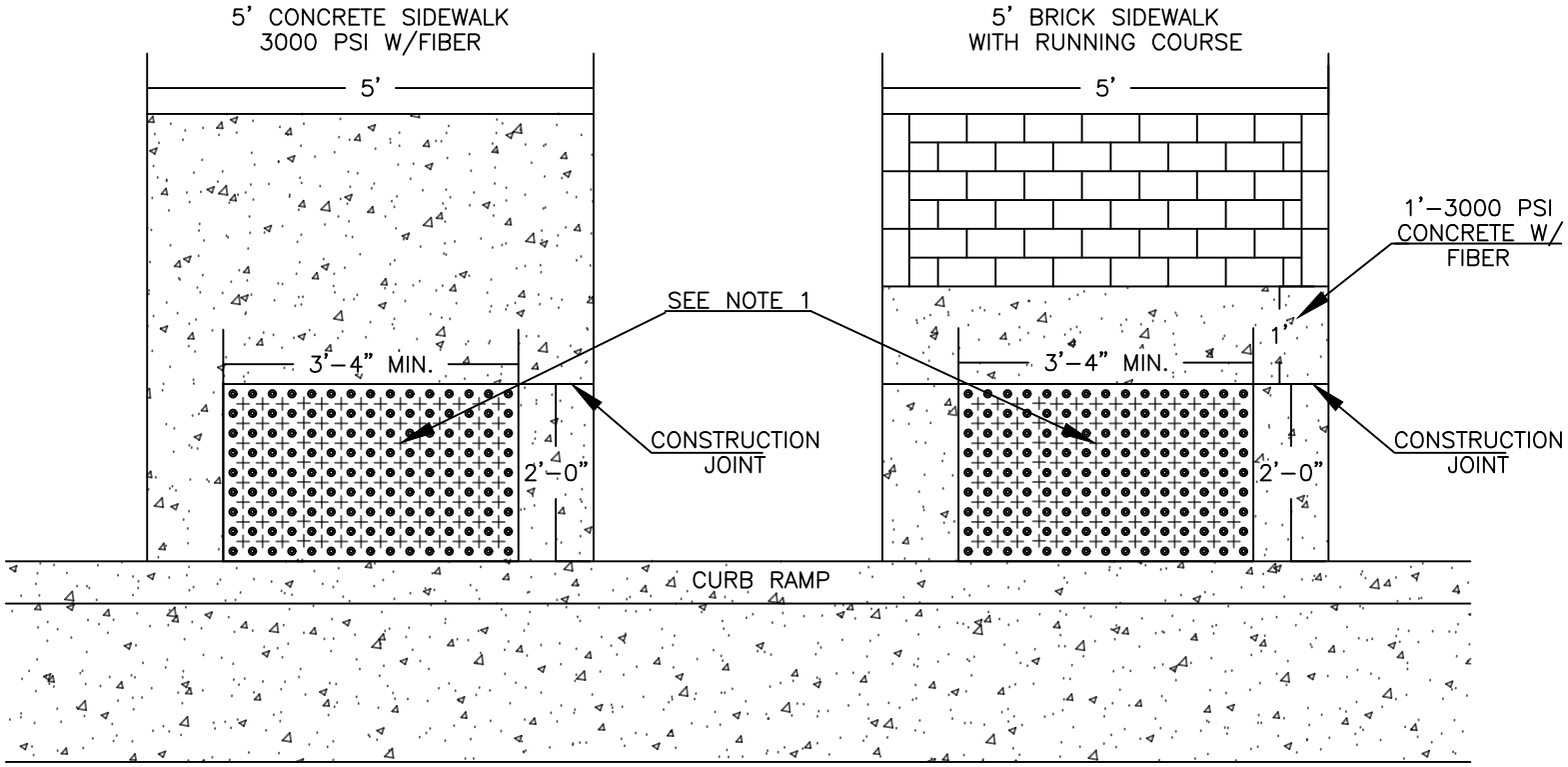
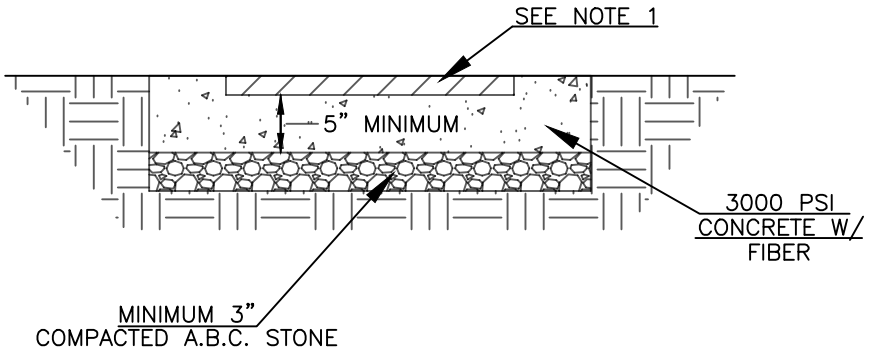
ACCESSIBLE PARKING SIGNAGE

T-2.07





NOTE:

1. USE "ACCESS TILE TACTILE SYSTEMS" TRUNCATED DOME, DETECTABLE WARNING TACTILE SURFACE IN BRICK RED TO MEET CURRENT ADA SPECIFICATIONS.

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ACCESSIBLE RAMP WITH DETECTABLE WARNING DOMES

T-2.08

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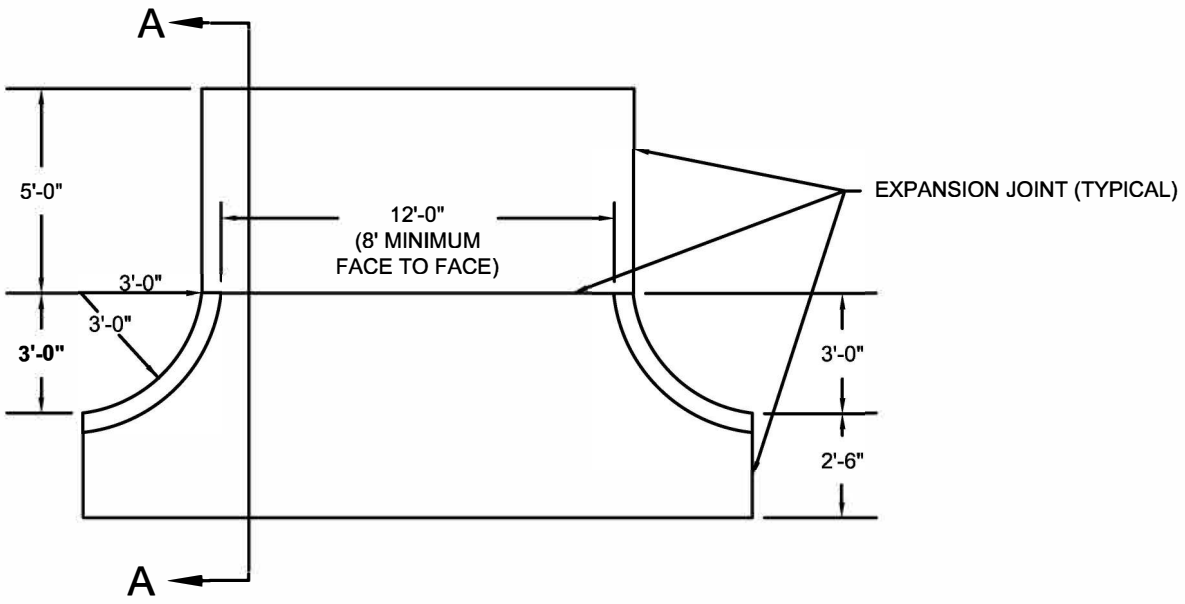
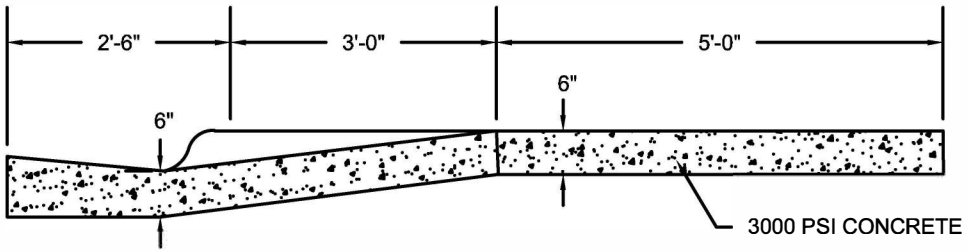


TYPICAL DRIVEWAY APRON



DRIVEWAY SECTION A-A

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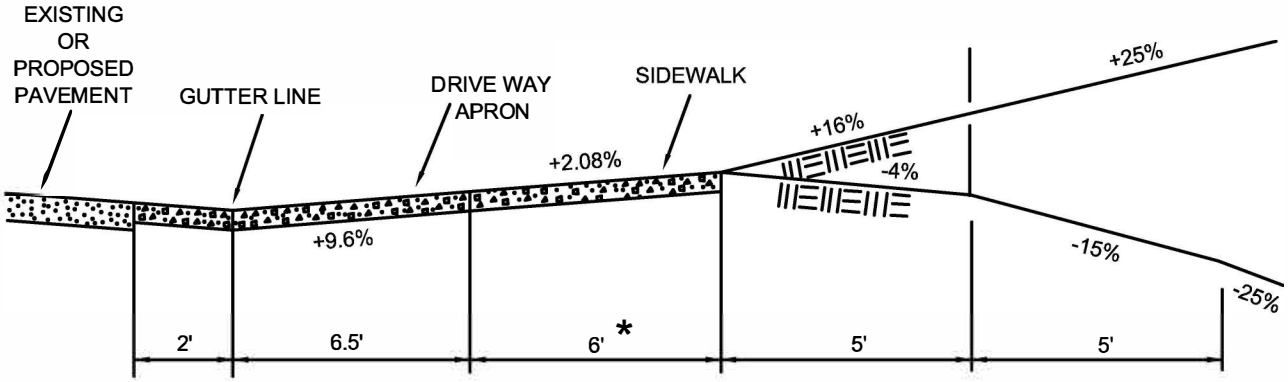
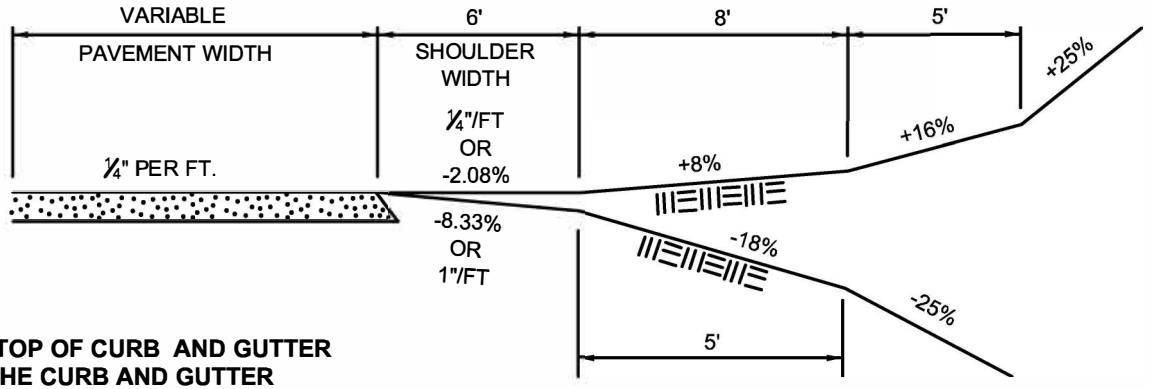
DRIVEWAY RAMP - CURB & GUTTER SECTION (ALT)

T-3.00



* 5' FOR SENSITIVE AREA AVENUE
AND SENSITIVE AREA RESIDENTIAL STREET

A. CURB & GUTTER , SIDEWALK SECTION



NOTE:
IF THE SLOPE BETWEEN THE TOP OF CURB AND GUTTER AND A POINT 30 FEET FROM THE CURB AND GUTTER EXCEEDS 20%, THIS SLOPE SHALL BE ADJUSTED TO A MAXIMUM OF 8.33% (1"/FT) UP OR 4.17% (1/2" /FT) DOWN.

B. SHOULDER SECTION

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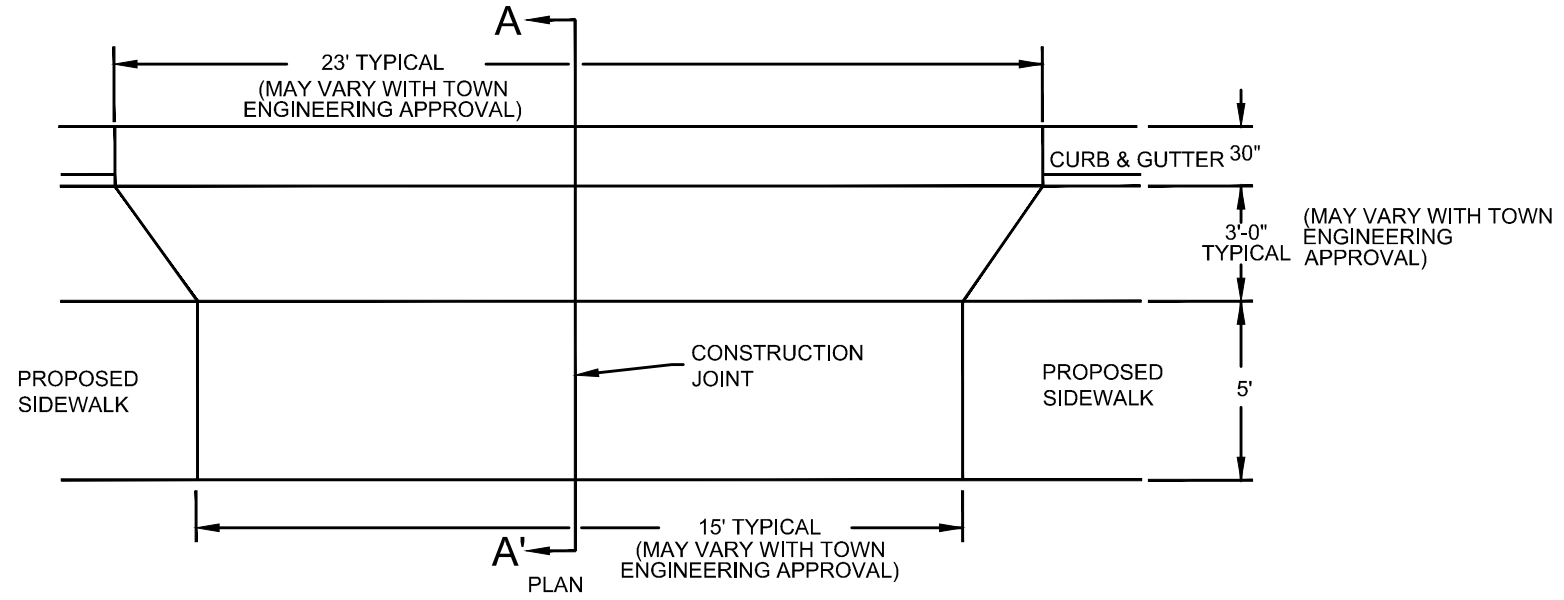
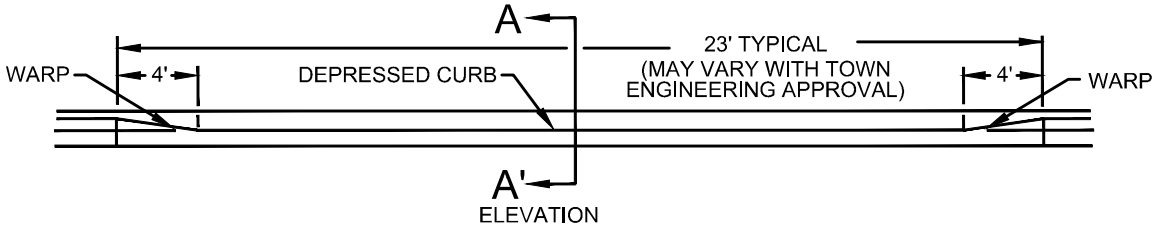
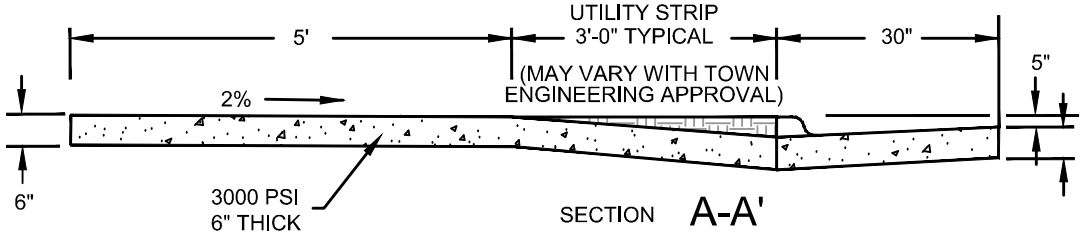
DRIVEWAY GRADES

DATE: 02/2017

T-4.00







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TOWN OF CHAPEL HILL

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STANDARD DETAIL

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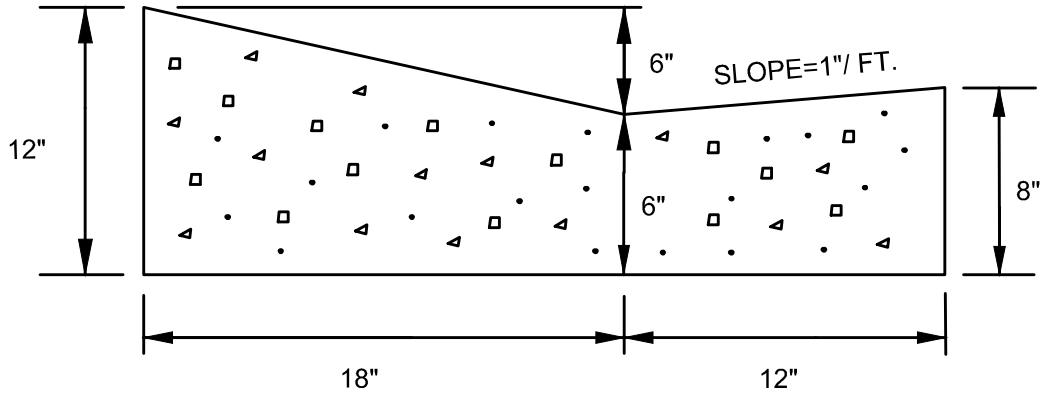
FAN TYPE DRIVEWAY ENTRANCE

DATE: 02/2017

T-5.00



30" VALLEY TYPE GUTTER

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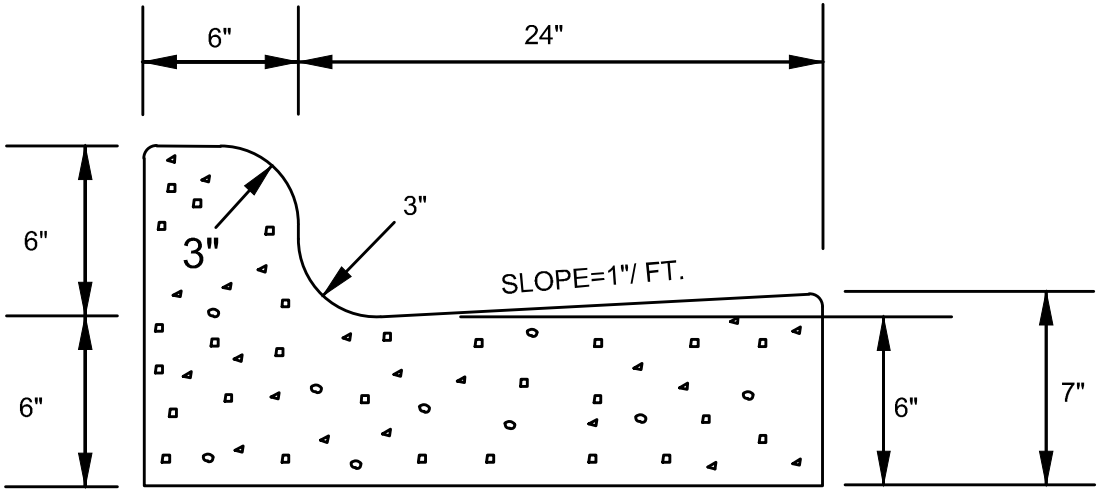
VALLEY CURB AND GUTTER SECTION

T-6.01



30" CURB & GUTTER

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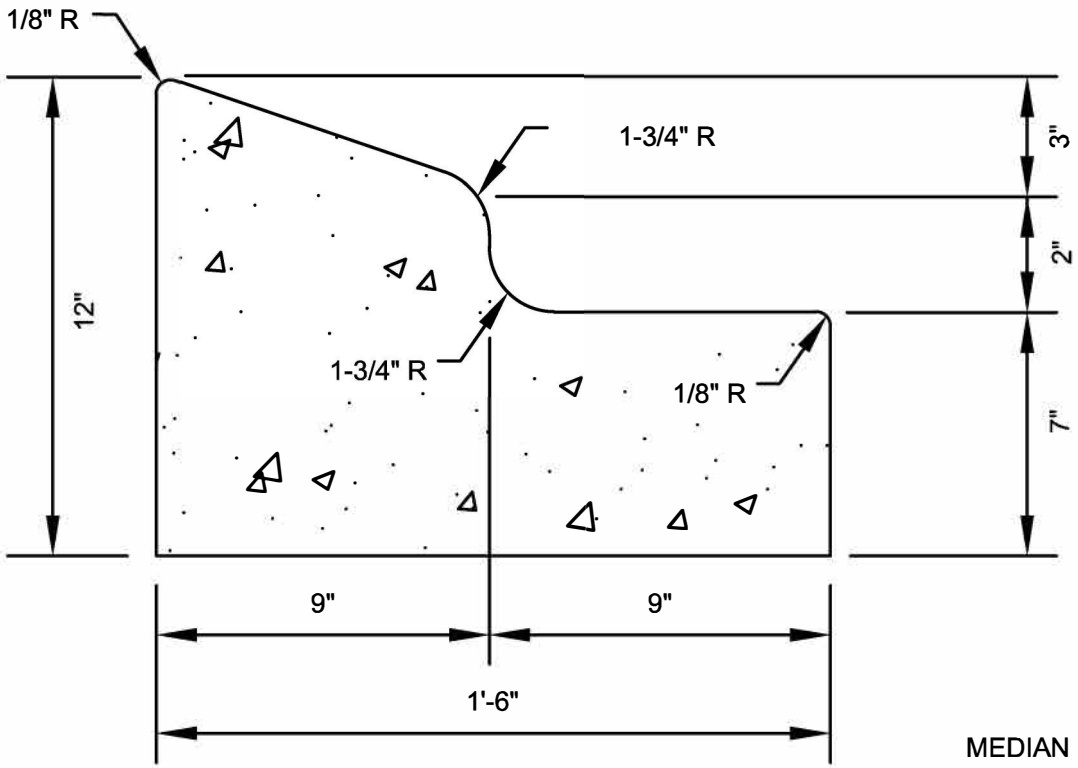
CURB AND GUTTER SECTION

T-6.02



MEDIAN CURB

1' - 6" CURB AND GUTTER

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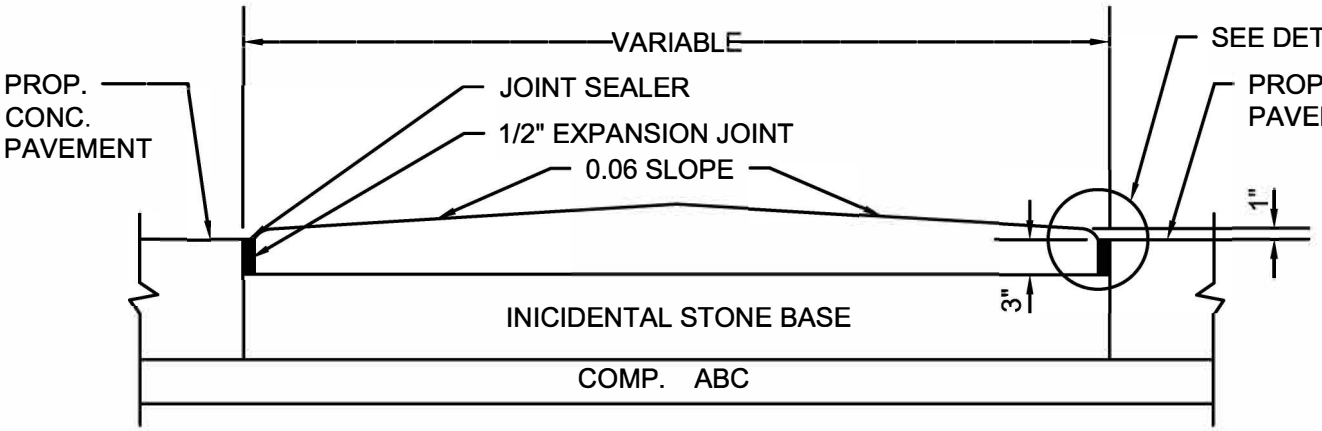
MEDIAN CURB

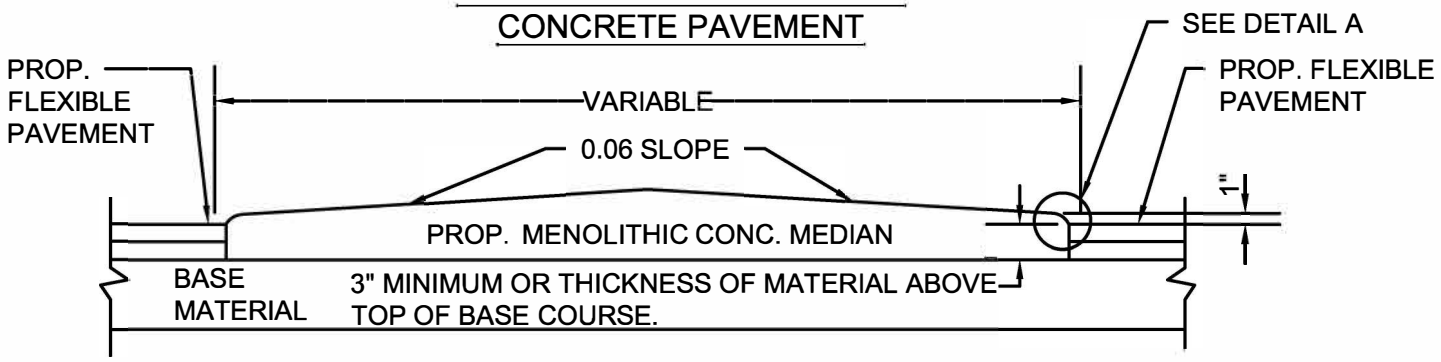
T-6.03



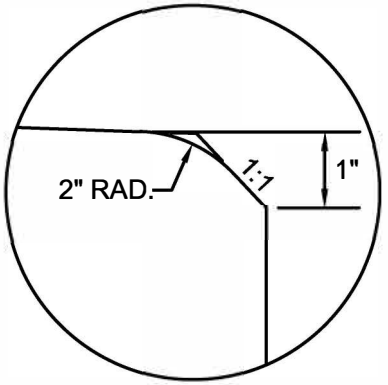
TRANSVERSE SECTION FOR CONCRETE PAVEMENT

GENRAL NOTES:

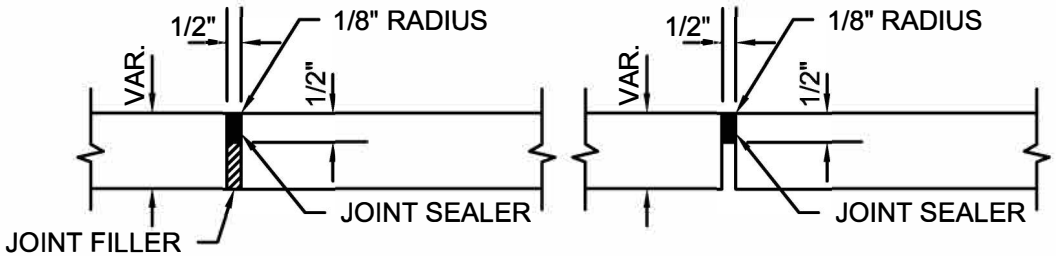
1. PLACE 1/2" EXPANSION JOINTS AT 30' INTERVALS AND AT ALL OTHER POINTS WHERER PROPOSED MEDIAN ABUTS RIGID OBJECTS. PLACE GROOVED JOINTS 1/2" DEEP AT 10' INTERVALS BETWEEN EXPANSION JOINTS. FILL THE TOP 1/2" OF EXPANSION JOINTS AND 1/2" GROVED JOINTS WITH JIONT SEALER.



TRANSVERSE SECTION FOR FLEXIBLE PAVEMENT



DETAIL - A



SHOWNG EXPANSION JOINT

SHOWNG GROOVED JOINT

PART LONGITUDINAL SECTION OF CONCRETE MEDIAN

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TOWN OF CHAPEL HILL

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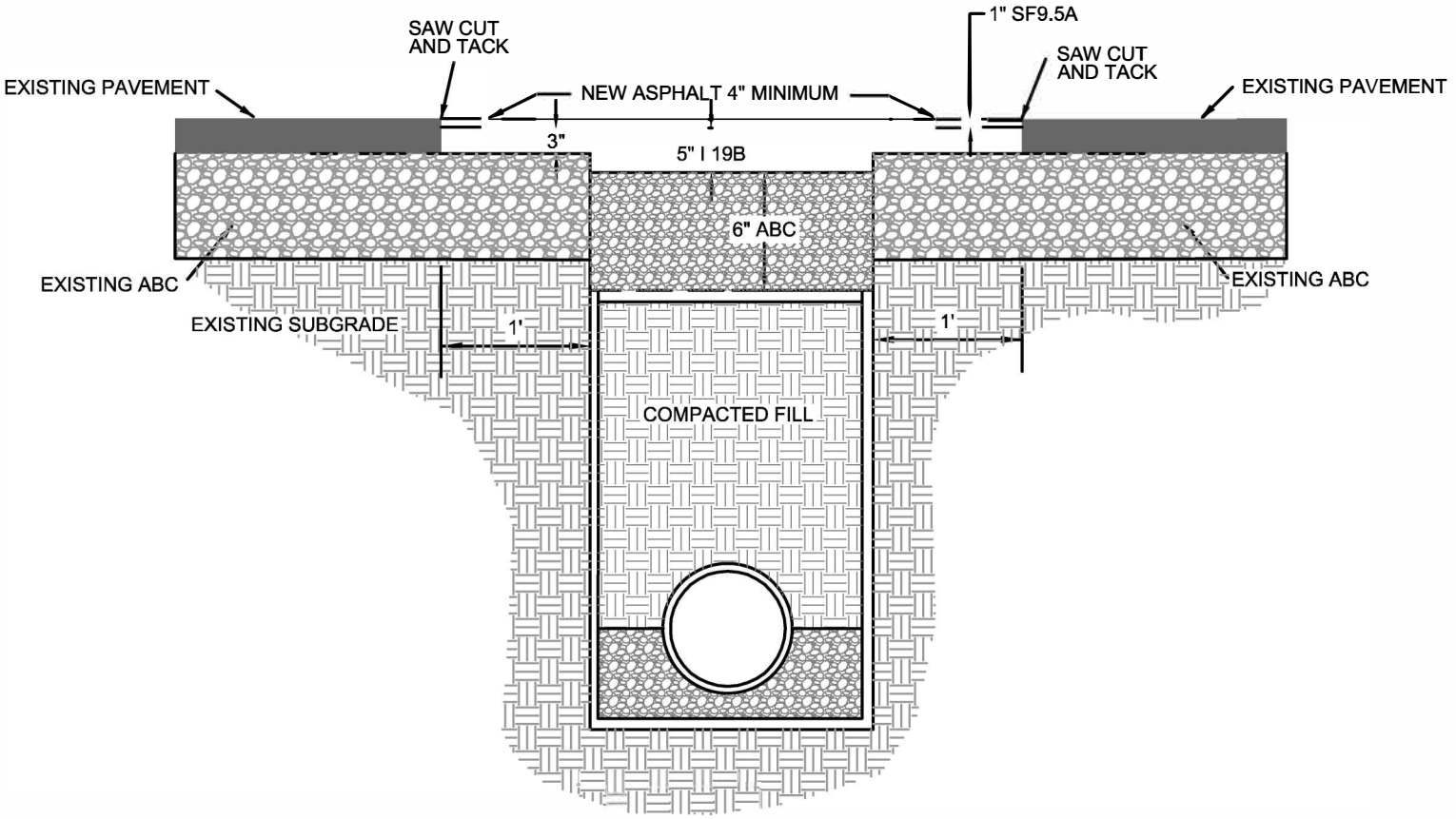
CONCRETE ISLAND

T-6.04



NOTES:

1. THE PAVEMENT EDGE SHALL BE DEFINED BY A STRAIGHT EDGE FORMED BY A MACHINED SAW CUT.
2. THE TRENCH SUBGRADE MATERIAL SHALL BE BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED TO A DENSITY OF AT LEAST 95% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-99 AS MODIFIED BY NCDOT.
3. THE FINAL 1' OF FILL SHALL CONSIST OF ABC MATERIAL COMPACTED TO A DENSITY EQUAL TO 100% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-80 AS MODIFIED BY NCDOT. BITUMINOUS BASE OR BINDER MAY BE SUBSTITUTED IF APPROVED BY TOWN OF CHAPEL HILL ENGINEER.
4. THE ENTIRE THICKNESS/VERTICAL EDGE OF THE CUT SHALL BE TACKED.
5. THE SAME DEPTH OF PAVEMENT MATERIAL WHICH EXISTS SHALL BE REINSTALLED, BUT IN NO CASE SHALL THE ASPHALT BE LESS THAN 4" THICK.
6. THE ASPHALT PAVEMENT MATERIAL SHALL BE INSTALLED AND COMPACTED THOROUGHLY AND ROLLED WITH A SMOOTH DRUM ROLLER TO ACHIEVE A SMOOTH, LEVEL PATCH.

" N O T T O S C A L E "

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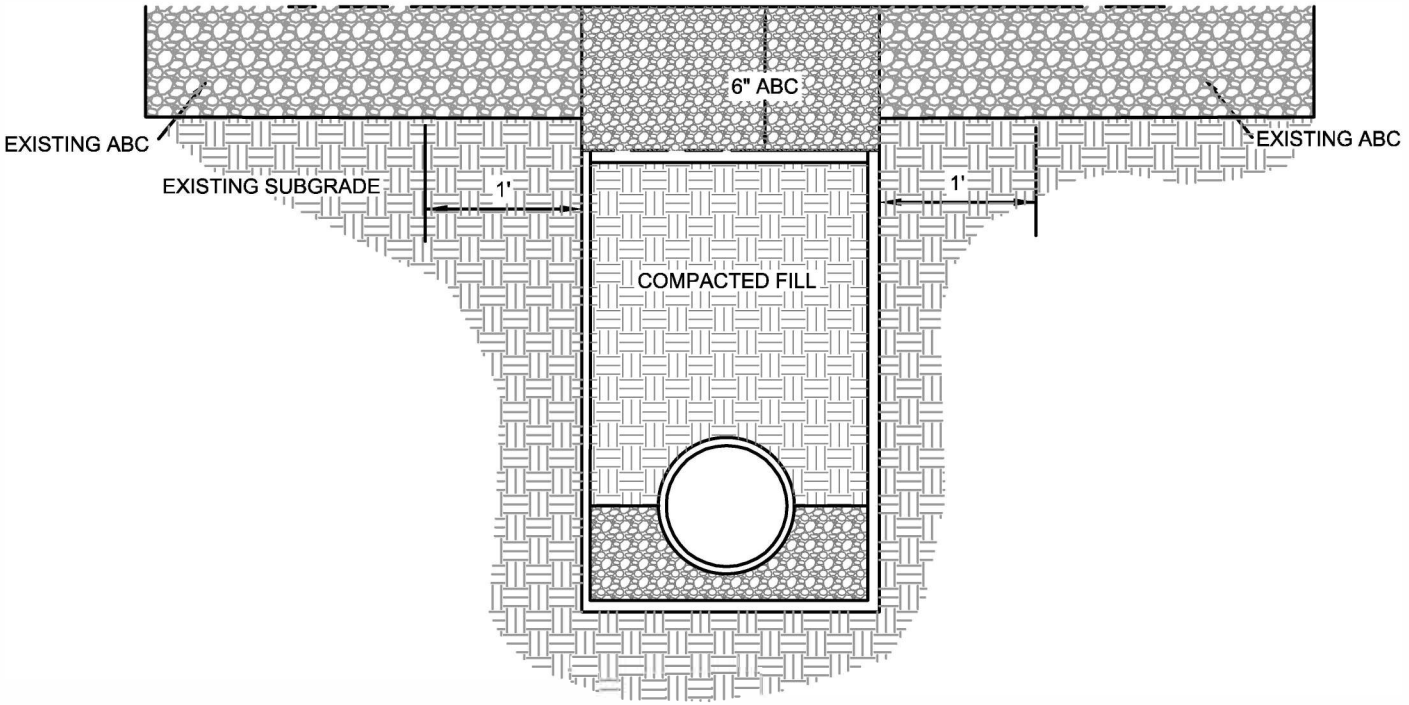
ASPHALT PAVEMENT PATCH

T-7.01



NOTES:

1. THE TRENCH SUBGRADE MATERIAL SHALL BE BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED TO A DENSITY OF AT LEAST 95% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-99 AS MODIFIED BY NCDOT.

2. THE FINAL 1' OF FILL SHALL CONSIST OF ABC MATERIAL COMPACTED TO A DENSITY EQUAL TO 100% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-80 AS MODIFIED BY NCDOT. BITUMINOUS BASE OR BINDER MAY BE SUBSTITUTED IF APPROVED BY TOWN OF CHAPEL HILL ENGINEER.

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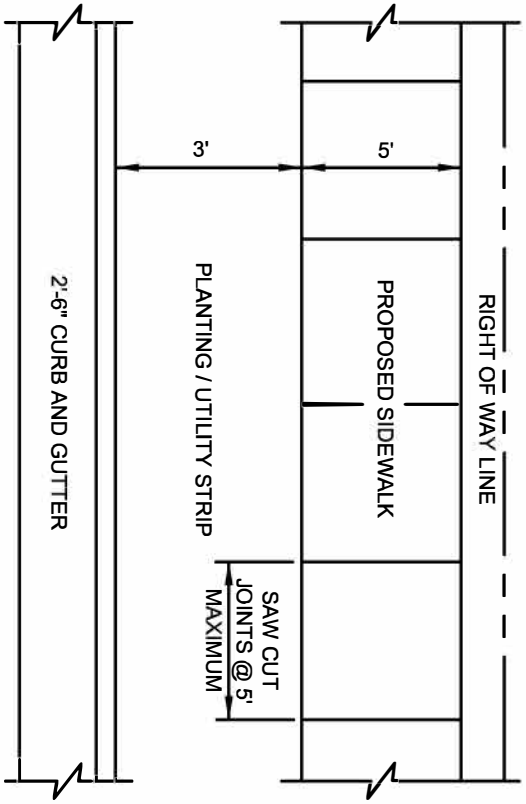
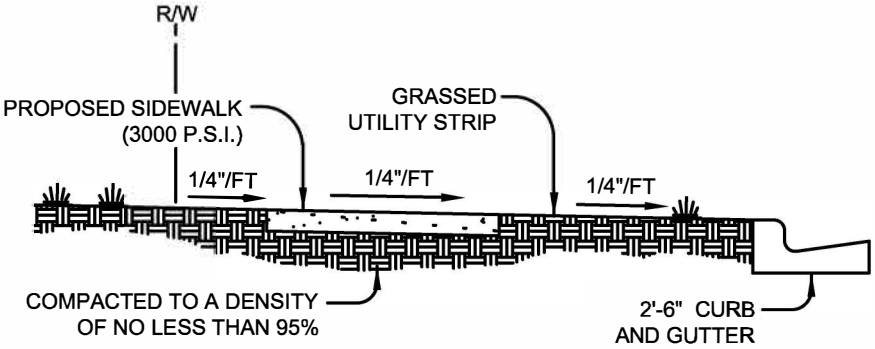
GRAVEL PATCH

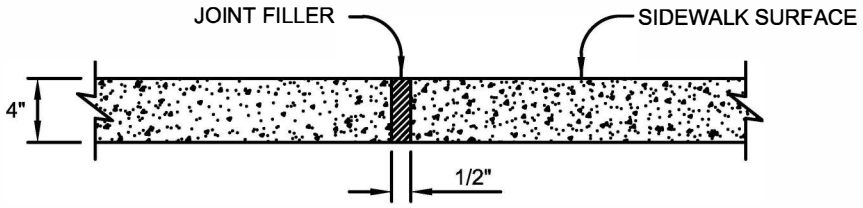
T-7.02



PLAN VIEW



TYPICAL SECTION



TRANSVERSE EXPANSION JOINT

NOTES:

1. **ALL CONCRETE TO BE 3000 PSI AND FINISHED WITH CURING COMPOUND.**
2. **SEE STANDARD DETAIL "T-0.00" FOR THROUGH DRIVEWAY SPECIFICATION.**
3. **EXPANSION JOINTS TO BE A MAXIMUM OF 50 FEET.**
4. **CONTROL JOINT EVERY 5 FEET.**
5. **ALL SIDEWALKS SHALL BE CONSTRUCTED WITH TOOLED 1/4" EDGE RADIUS.**
6. **IF UTILITY STRIP IS COMPLETELY ELIMINATED SIDEWALK SHALL BE PLACED DIRECTLY AT BACK OF CURB, WITH 1/4" EDGE RADIUS.**

" N O T T O S C A L E "

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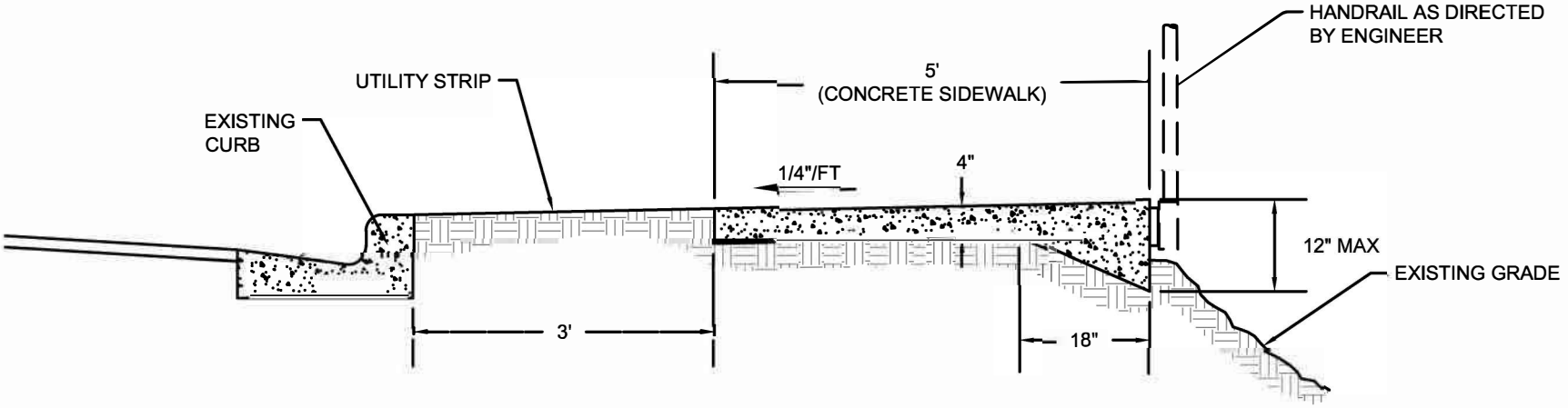
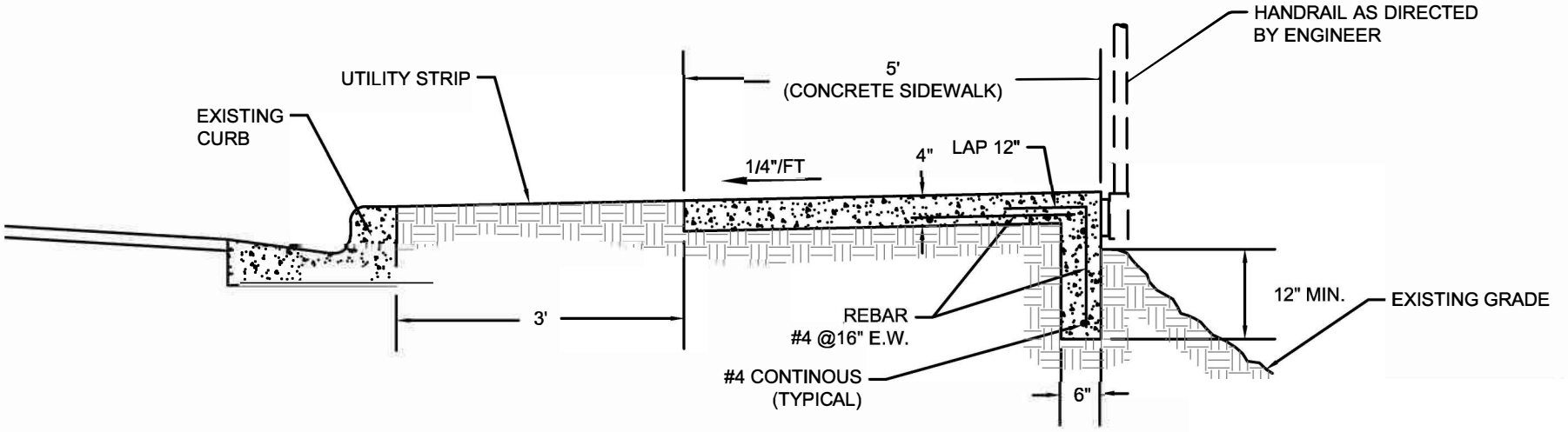
TYPICAL SIDEWALK

T-8.01



UNREINFORCED SIDEWALK W/THICKENED EDGE



SIDEWALK W/REINFORCED TURNDOWN

TOWN OF CHAPEL HILL

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SPECIAL SIDEWALK DETAILS (THICKENED EDGE & TURNDOWN)

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T-8.02

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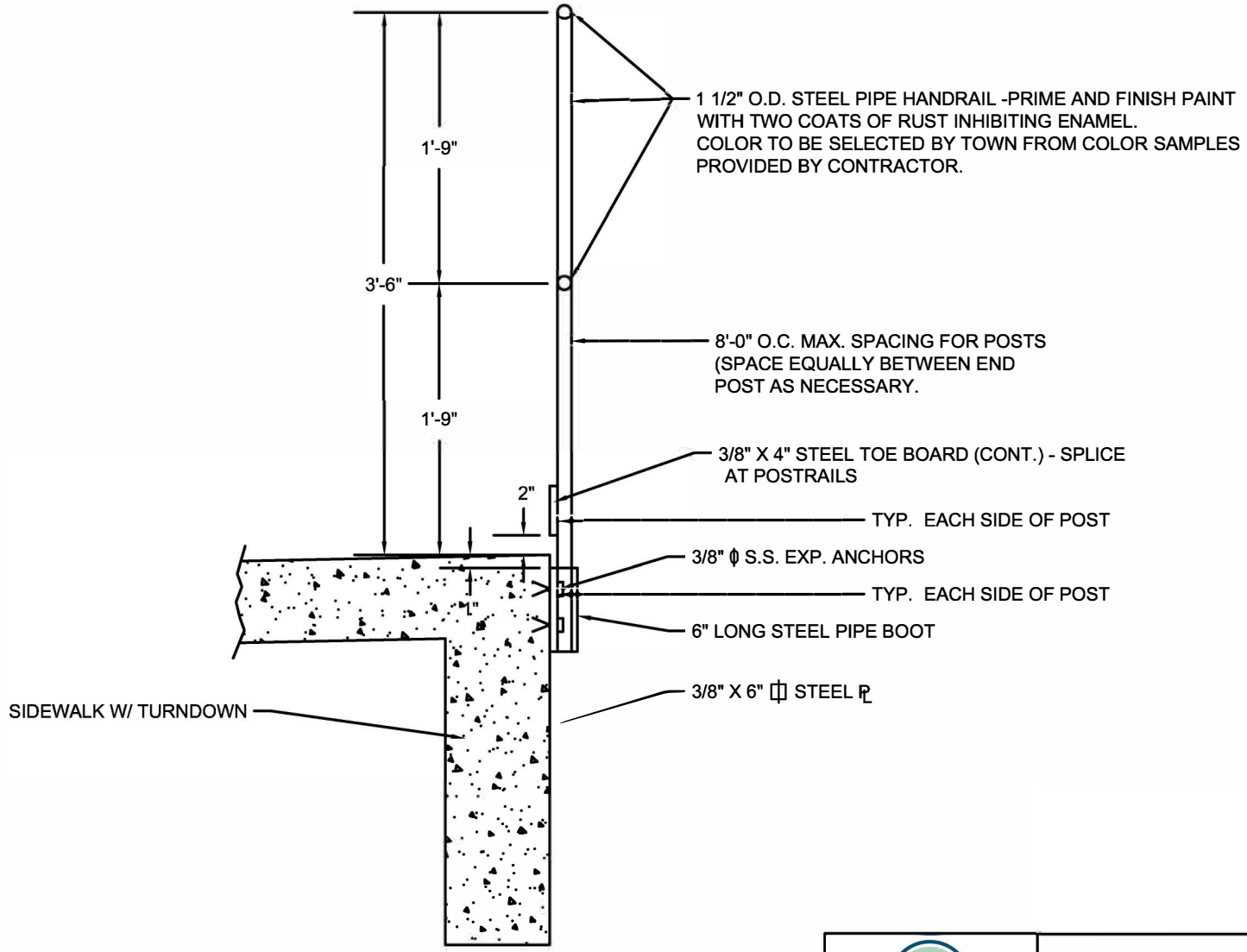

NOTES:

1. **OPTIONAL SQUARE TUBING CAN BE USED FOR RAILING CONSTRUCTION IF APPROVED BY THE TOWN.**

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TOWN OF CHAPEL HILL

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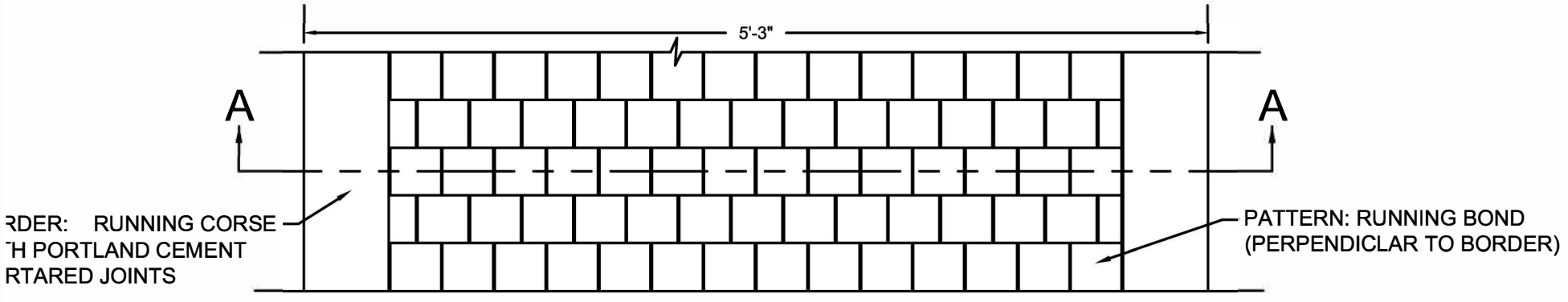
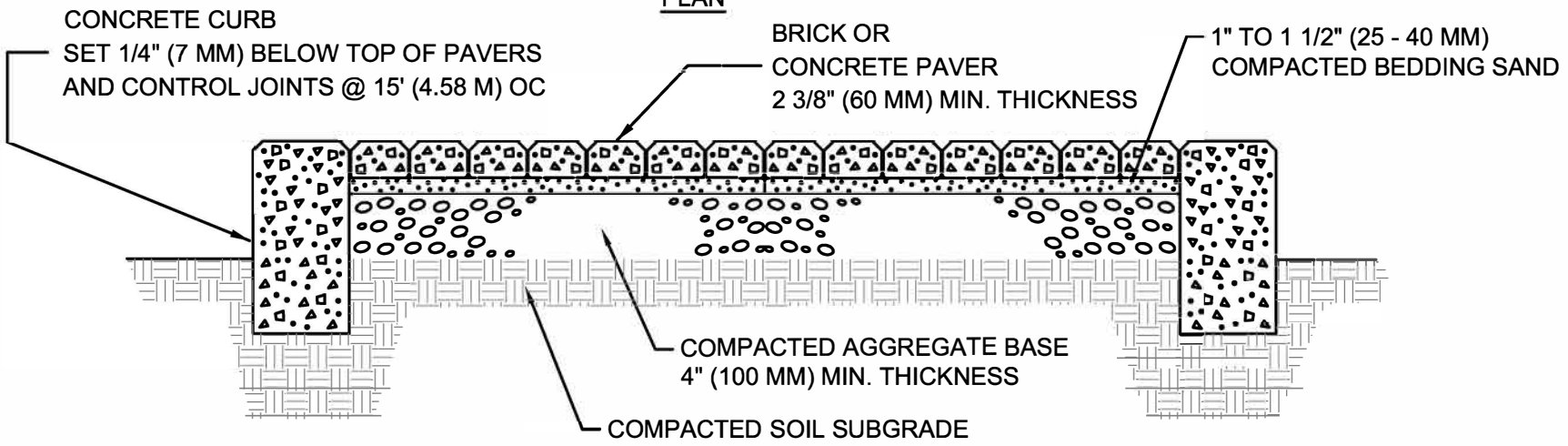
SIDEWALK TYPE HANDRAIL

T-8.03



PLAN



SECTION A-A

NOTES:

1. **BRICK OR CONCRETE PAVERS ALLOWED ONLY UNDER SPECIAL CONDITIONS.**
2. **THICKNESS OF BASE MAY VARY WITH SUBGRADE/TRAFFIC CONDITIONS.**
3. **SCATTER SAND OR SCREENINGS OVER COMPLETE WORK AND SWEEP INTO CRACKS.**
4. **CONCRETE PAVERS SHOULD CONFORM TO REQUIREMENTS OF ASTM C-1319. BRICK PAVERS SHOULD CONFORM TO REQUIREMENTS OF ASTM C902-95.**
5. **TRIANGLE BRICK COMPANY #1630P PAVER (OR EQUAL) TYPICAL.**
6. **RUNNING COURSE SET WITH PORTLAND CEMENT MOTAR BETWEEN & BELOW OR WITH CURB.**

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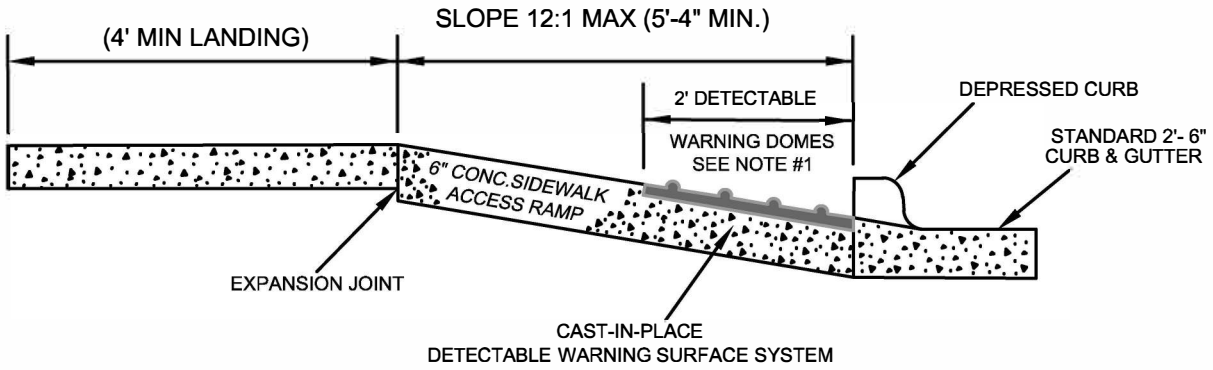
BRICK SIDEWALK

T-8.04

RAMP SECTION

WITH DETECTABLE WARNING SURFACE
CAST-IN-PLACE SYSTEM



NOTES:

1. **DETECTABLE WARNING DOMES SHALL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON DETAIL.**

2. **OBTAIN 70% CONTRAST VISIBILITY WITH ADJOINING SURFACE, EITHER LIGHT ON DARK, OR DARK ON LIGHT SEQUENCE COVERING THE DETECTABLE WARNING AREA.**

" N O T T O S C A L E "

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DETECTABLE WARNING CAST-IN-PLACE

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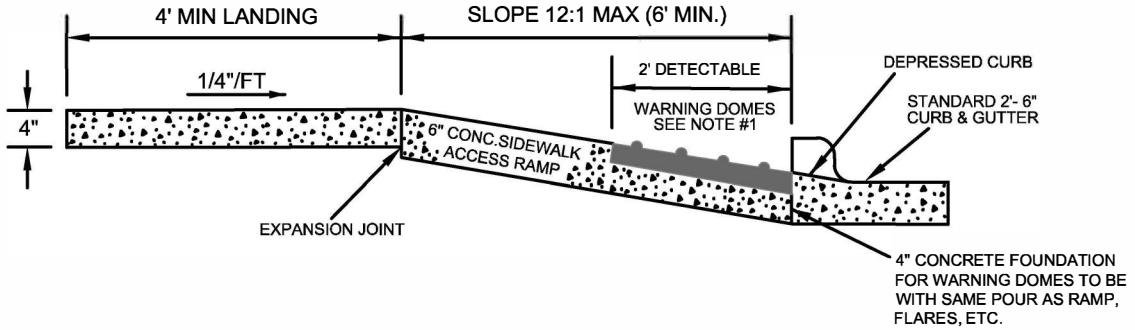
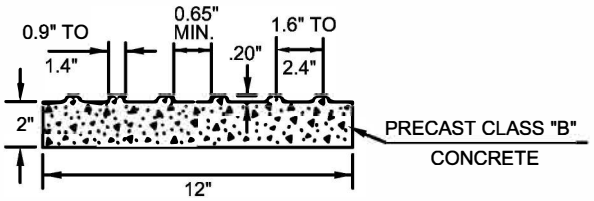
T-9.01

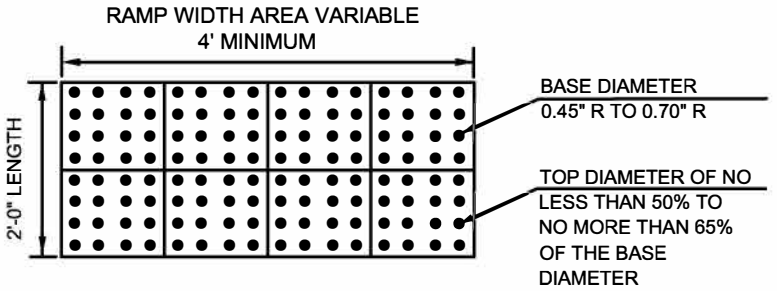


RAMP SECTION

WITH DETECTABLE WARNING PAVERS



DETECTABLE WARNING
DOMES CONCRETE PAVER



NOTES:

1. **DETECTABLE WARNING DOMES SHALL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON DETAIL. SIZE OF PAVER SHALL BE 1' X 1'.**
2. **OBTAIN 70% CONTRAST VISIBILITY WITH ADJOINING SURFACE , EITHER LIGHT ON DARK , OR DARK ON LIGHT SEQUENCE COVERING THE DETECTABLE WARNING AREA.**

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TOWN OF CHAPEL HILL

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STANDARD DETAI L

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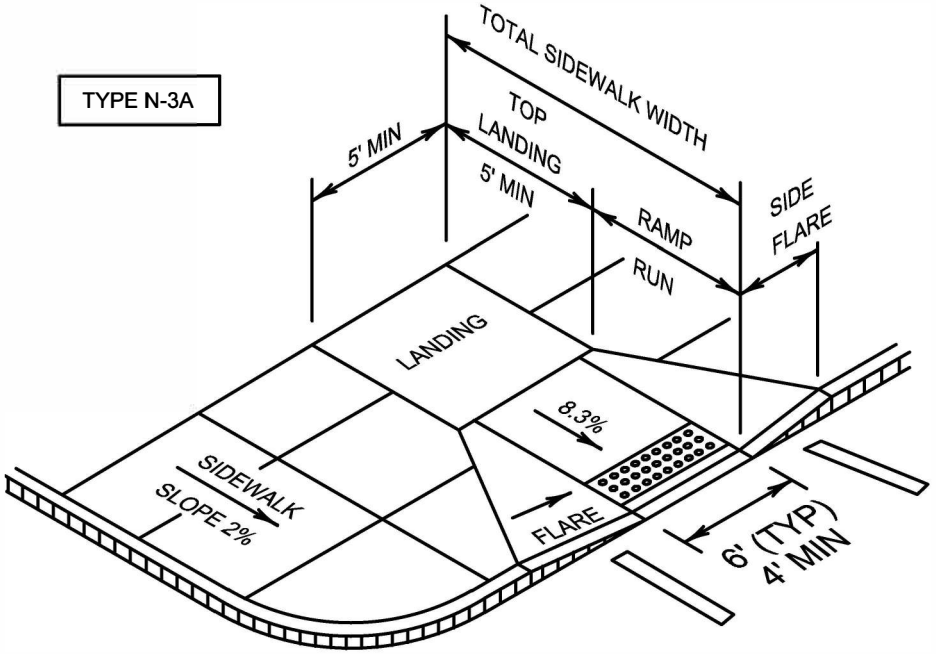
DETECTABLE WARNING SURFACE PAVERS

T-9.02

TYPE N-3A

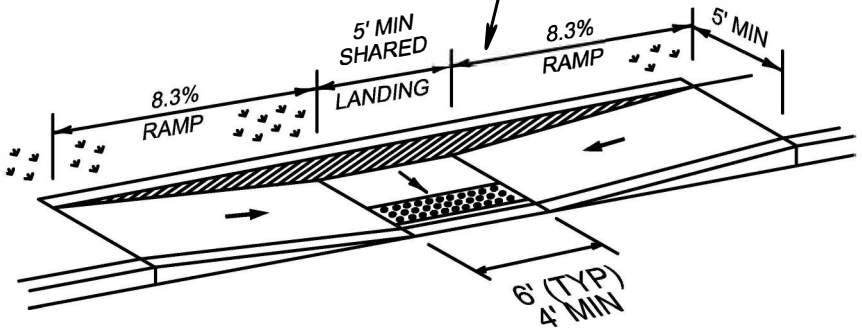


DETECTABLE WARNING SURFACE PLACEMENT

T-0.00

TYPE R-2

PLANTING OR OTHER NON-WALKING SURFACE IF DROPOFF IS NOT PROTECTED



PARALLEL CURB RAMP

"NOT TO SCALE"

TOWN OF CHAPEL HILL

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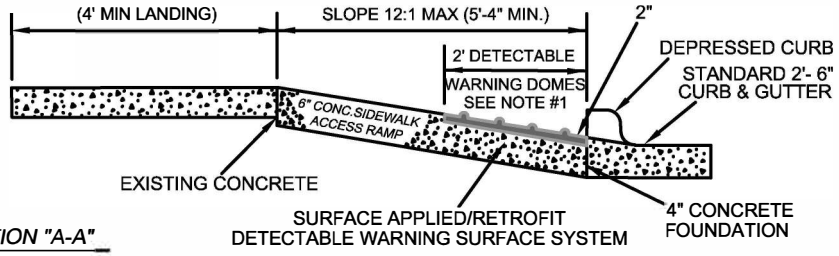
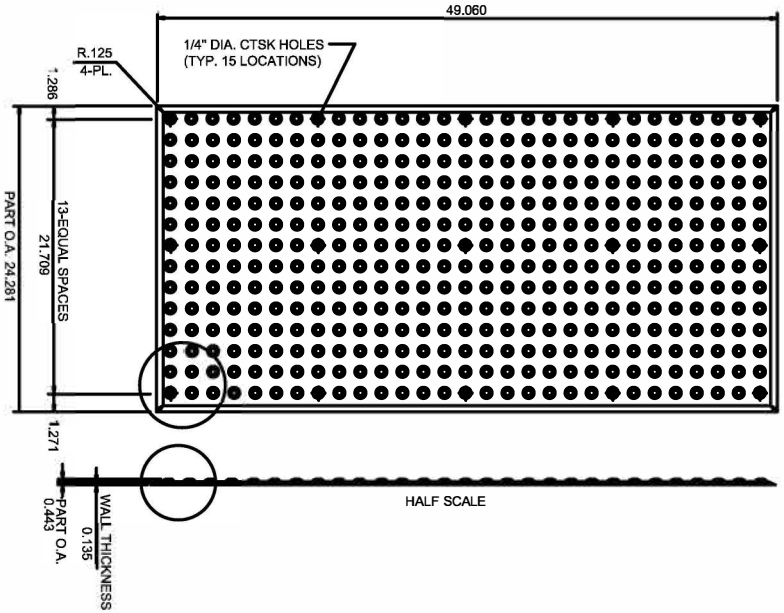
DETECTABLE WARNING SURFACE PLACEMENT

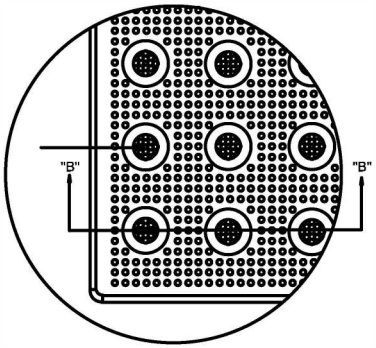
T-9.03

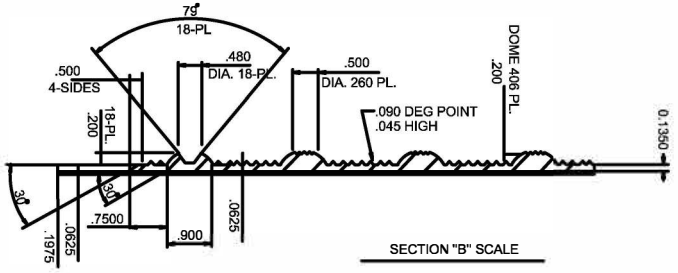


SECTION "A-A"
/ITH DETECTABLE WARNING PAVERS



TILE INSTALLATION
VIEW B 4X SCALE





NOTE:
THIS APPLICATION ONLY TO BE USED
WHEN RETRO FITTING EXISTING
BARRIER FREE RAMPS

NOTES:
1. DETECTABLE WARNING DOMES SHALL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON DETAIL.

2. OBTAIN 70% CONTRAST VISIBILITY WITH ADJOINING SURFACE, EITHER LIGHT ON DARK, OR DARK ON LIGHT SEQUENCE COVERING THE DETECTABLE WARNING AREA.

"NOT TO SCALE"

TOWN OF CHAPEL HILL

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DETECTABLE WARNING SURFACE, SURFACE APPLIED (RETOFIT ONLY)

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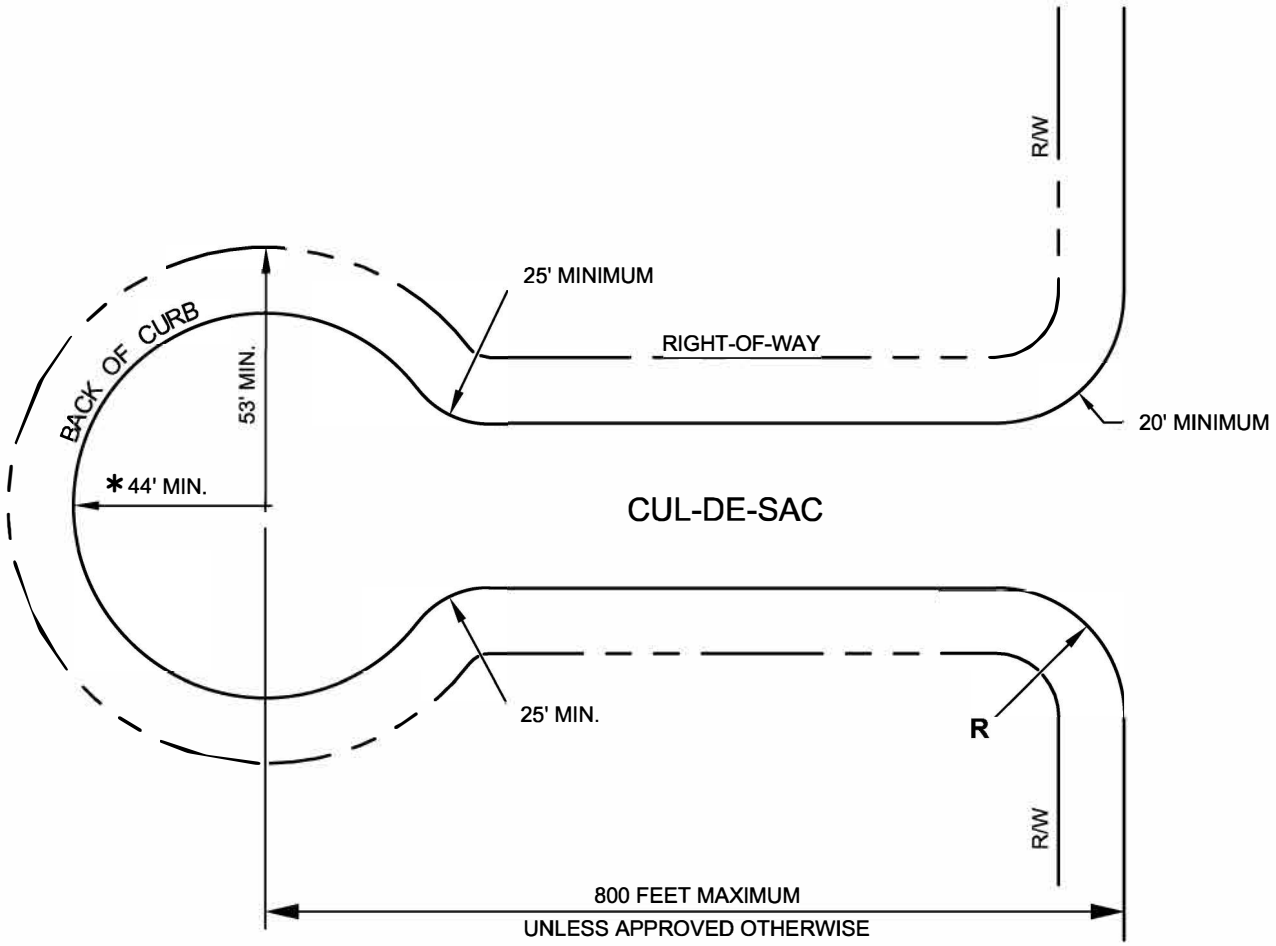
T-9.04



R = 25' MINIMUM WHEN INTERSECTING WITH A MINOR STREET.
R = 30' MINIMUM ON ALL OTHER INTERSECTIONS.

* RADIUS MAY BE REDUCED TO 40 FT IF CUL-DE-SAC IS 150 FT OR LESS IN LENGTH.

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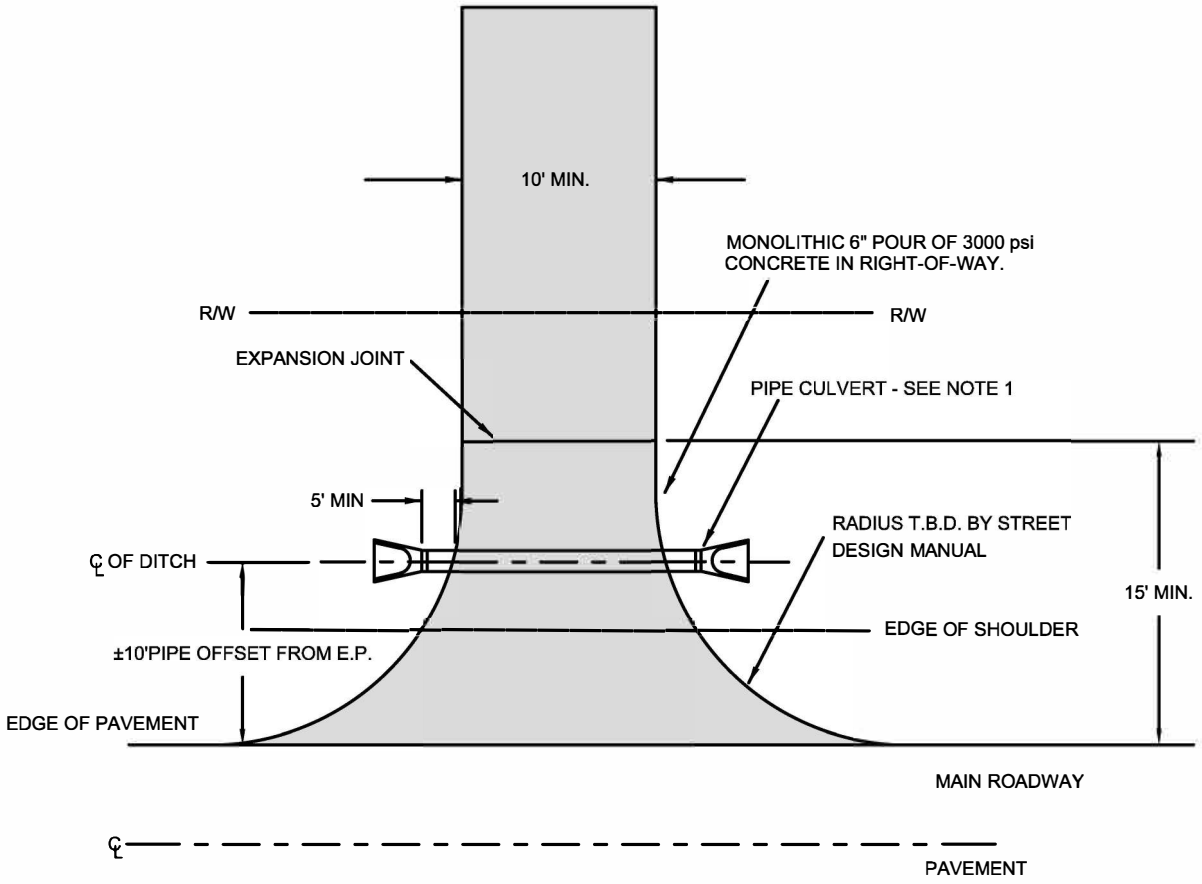
RESIDENTIAL CUL-DE-SAC DIMENSIONS

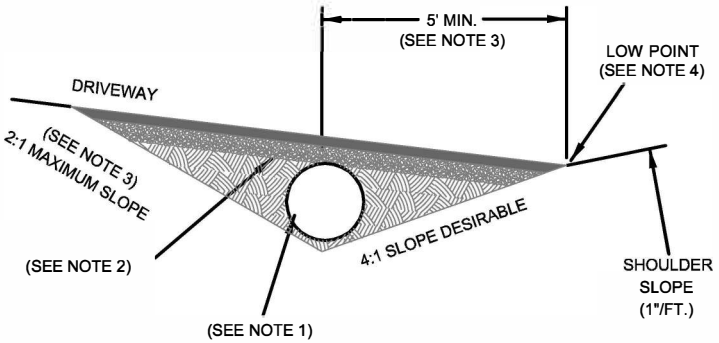
T-10.01



NOTES:

1. **PIPE TO BE RCP AND SIZED TO CARRY THE DESIGN FLOW OF THE DITCH FOR A 10-YEAR, 24-HOUR STORM EVENT; THE MINIMUM ACCEPTABLE PIPE SIZE IS 15" IF THE DESIGN FLOW WOULD REQUIRE A SMALLER PIPE.**
2. **6" MINIMUM COVER OVER PIPE MEASURED FROM TOP OF PAVEMENT.**
3. **STEEPER SLOPES CAN BE ALLOWED WHERE SPECIAL STABILIZATION IS PROVIDED IN ACCORDANCE WITH EROSION AND SEDIMENTATION CONTROL ORDINANCE.**
4. **USE 5' VERTICAL CURVE FOR TRANSITION.**
5. **SOD OR SEED FULL EXTENT OF R/W LIMITS ALONG FRONTAGE FINISHED GRADE OF SOD TO BE 1" BELOW EDGE OF ROADWAY.**

WITH UNPAVED ROADSIDE DITCH



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TOWN OF CHAPEL HILL

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STANDARD DETAIL

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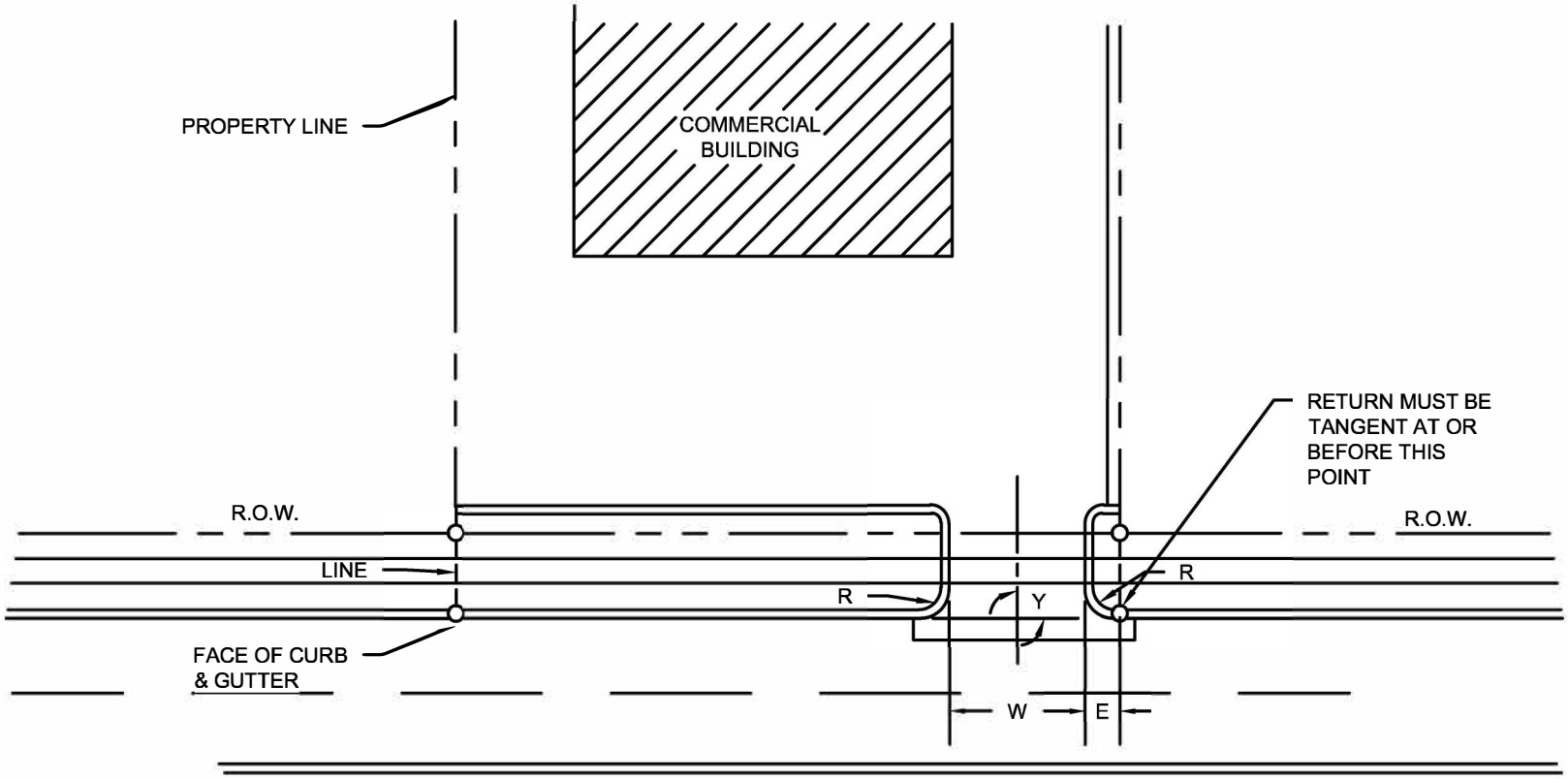
RESIDENTIAL DRIVEWAY APRON NON CURB & GUTTER STREETS

T-10.02



NOTES:

1. **R-3' (TOWN STD. RAMP)**
   -10 MIN., 20' MAX. (STREET TYPE)
   W - (STREET TYPE)
   - ONE WAY: 12' MIN., 20' MAX.
   - TWO WAY: 20' MIN., 36' MAX.
   E - 3' MIN.
   Y - 90° PREFERRED
   - 75°-90° WITH TOWN ENGINEERING APPROVAL.

2. **ALL RADII ARE TO BACK OF CURB.**

SINGLE DRIVEWAY COMMERCIAL ESTABLISHMENT
FIGURE 1

"NOT TO SCALE"

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TOWN OF CHAPEL HILL
STANDARD DETAIL

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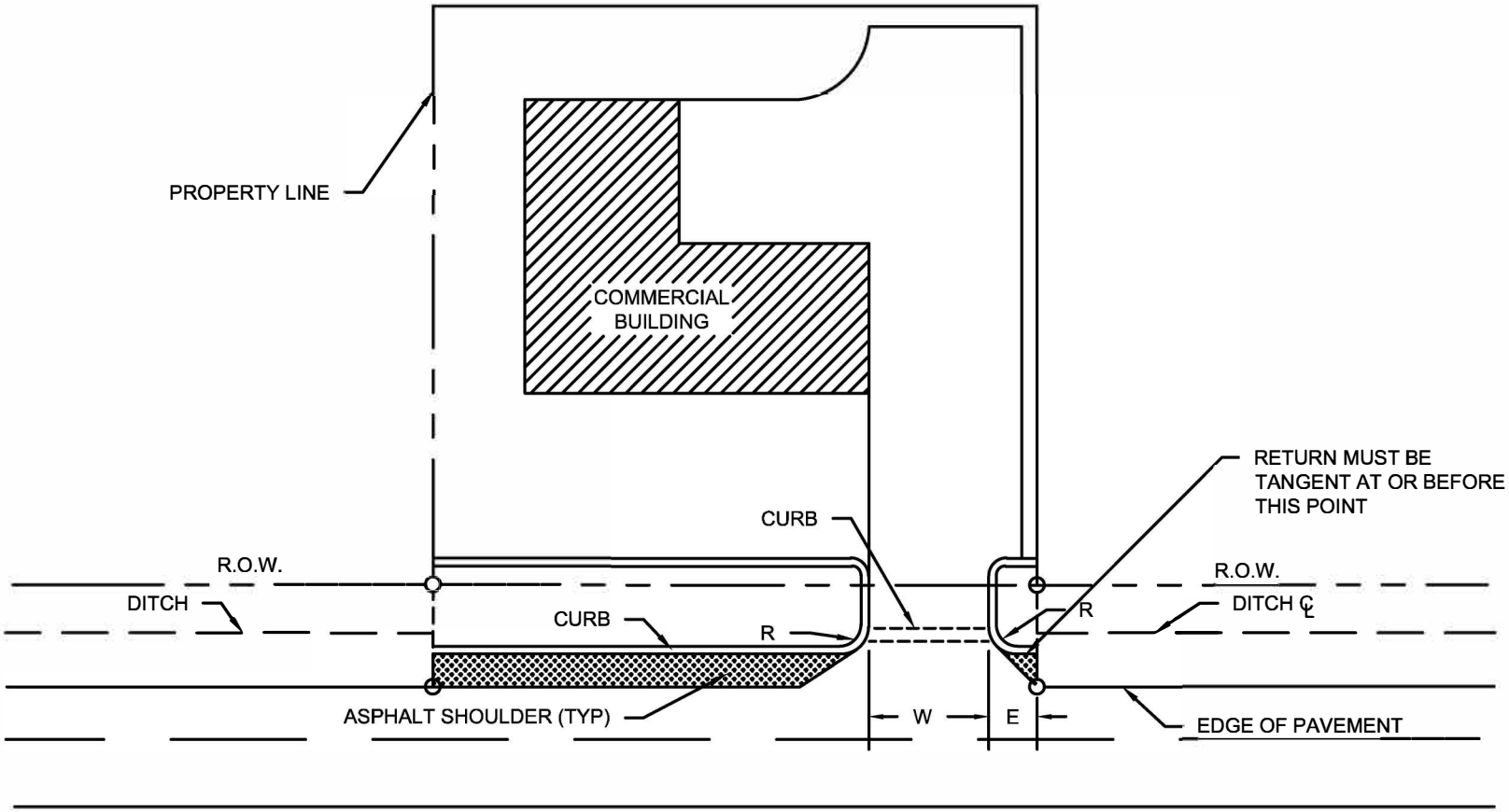
COMMERCIAL SINGLE DRIVEWAY - CURB AND GUTTER

T-11.01



NOTES:

1. **R - 10' MIN., 30' MAX.**
   E - 10' MIN.
   W - ONE WAY: 12' MIN., 20' MAX.
   - TWO WAY: 20' MIN., 36' MAX.

1. **ALL RADII ARE TO BA CKOF CURB.**

SINGLE DRIVEWAY COMMERCIAL ESTABLISHMENT
FIGURE 2

" N O T T O S C A L E "

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TOWN OF CHAPEL HILL
STANDARD DETAIL

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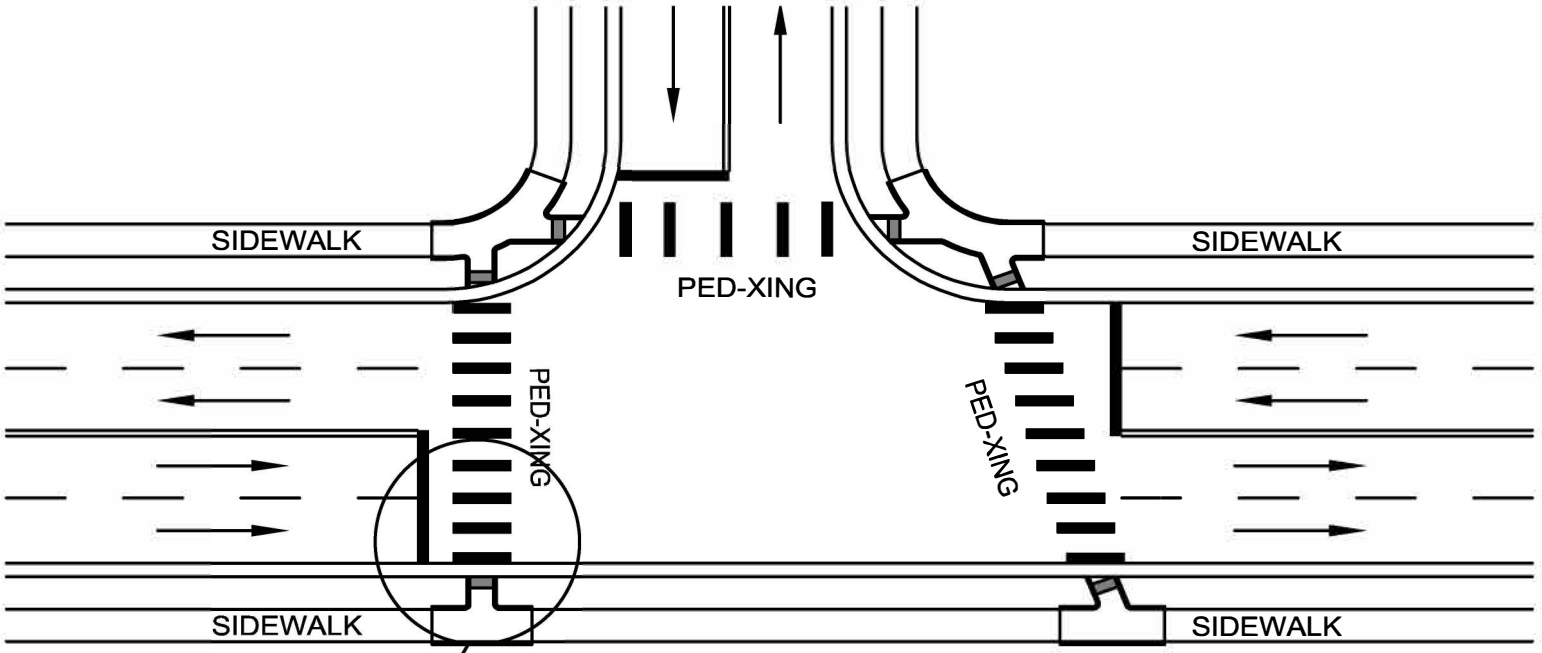
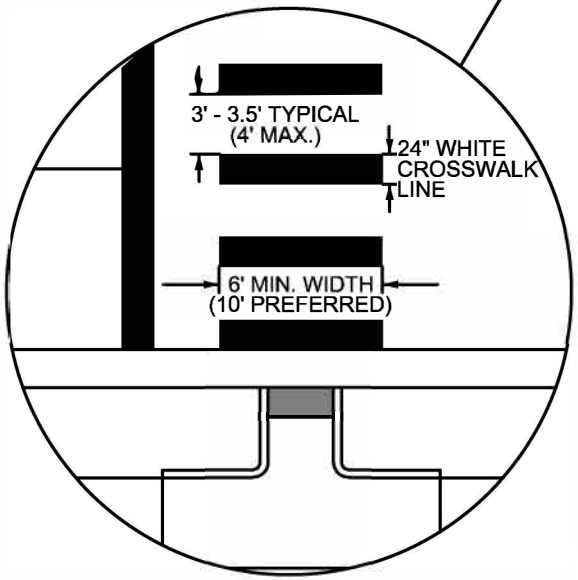
COMMERCIAL SINGLE DRIVEWAY - DITCH SECTION

T-11.02





NOTES:

1. **HI-VISIBILITY CROSSWALKS SHOULD BE USED AT CROSSINGS WHERE THE INTERSECTION IS SIGNALIZED OR UN-CONTROLLED BY ANY TRAFFIC CONTROL DEVICE (e.g. STOP SIGN).**
2. **THE CROSSWALK LINE SHOULD BE PLACED AT THE ANGLE OF THE TRAVEL LANES AND TRAVERSE THE PEDESTRIAN CROSSING.**
3. **A CROSSWALK LINE SHOULD BE PLACED TO AVOID WHEEL PATHS. THIS IS IDEALLY DONE BY CENTERING THE LINES AT THE EDGE OF EACH TRAVEL LANE AND IN THE CENTER OF EACH TRAVEL LANE. DUE TO VARYING LANE WIDTHS THIS IS SOMETIMES NOT POSSIBLE.**
4. **PLACE STOP BARS A MINIMUM OF 4 FEET FROM NEAREST CROSSWALK LINE. STOP BARS AT SIGNALIZED INTERSECTIONS SHOULD BE COORDINATED WITH THE DIVISION OR AS DIRECTED BY THE ENGINEER.**
5. **CURB RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE TO THE LATEST STANDARD DRAWINGS.**
6. **USE 90 MIL THERMOPLASTIC FOR PAVEMENT MARKINGS.**

" N O T T O S C A L E "

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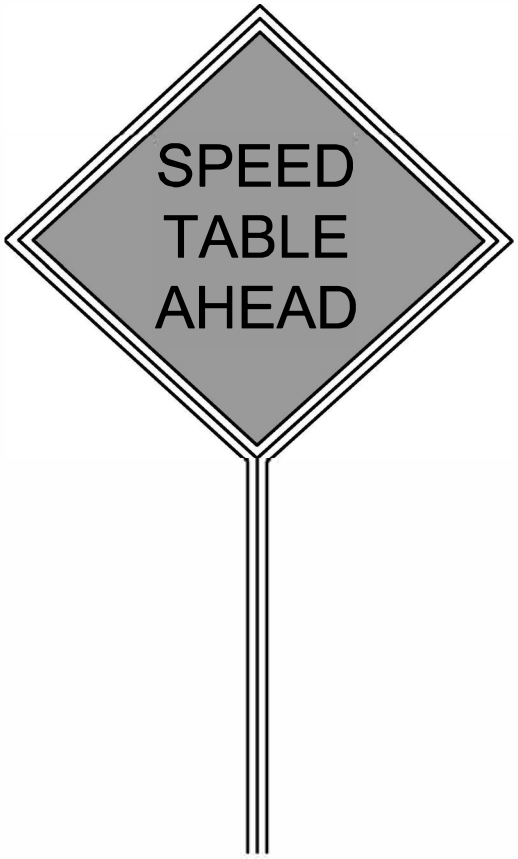
PAVEMENT MARKINGS HI-VISIBILITY PEDESTRIAN CROSSWALK

T-12.01



(OR)

ADVANCED WARNING SIGNS

NOTES:

1. **ALL SIGNS MUST BE MOUNTED AT A HEIGHT OF 6' FROM THE BOTTOM OF THE SIGN UNLESS OTHERWISE APPROVED.**

2. **ALL SIGNS MUST BE A SIZE OF 24" X 24" UNLESS OTHERWISE APPROVED.**

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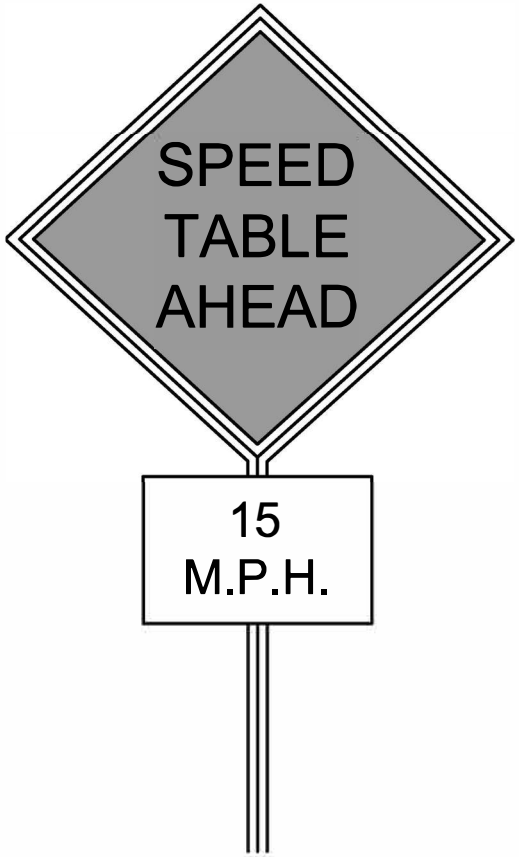
ADVANCED TRAFFIC CALMING WARNING SIGNS

DATE: 02/2017

T-12.02



(OR)

SIGNS AT SPEED TABLE FOR RAISED CROSSWALK

NOTES:

1. ALL SIGNS MUST BE MOUNTED AT A HEIGHT OF 6' FROM THE BOTTOM OF THE SIGN UNLESS OTHERWISE APPROVED.
2. ALL SIGNS MUST BE A SIZE OF 24" X 24" UNLESS OTHERWISE APPROVED.

" N O T T O S C A L E "

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TOWN OF CHAPEL HILL
STANDARD DETAIL

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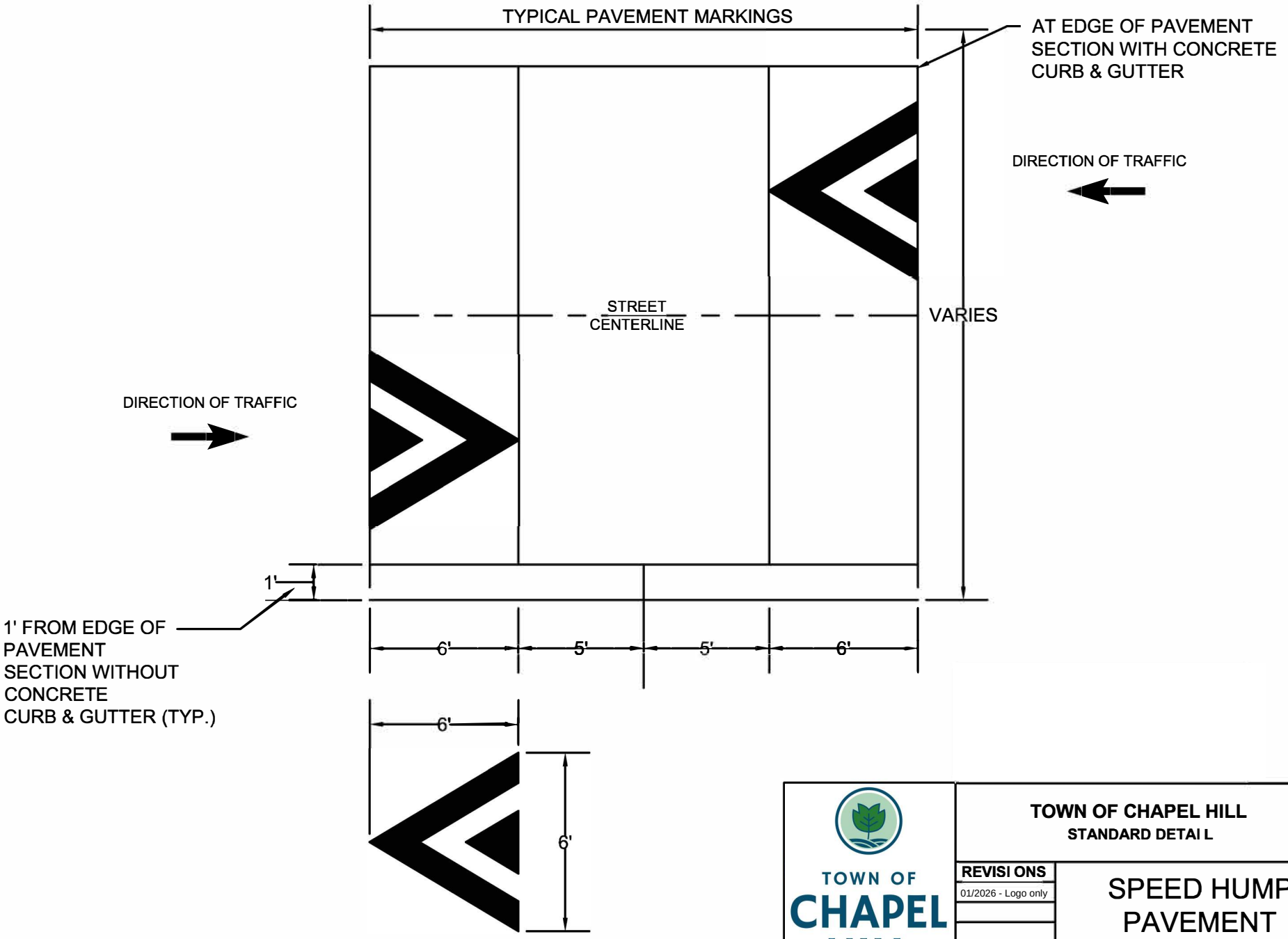
TRAFFIC CALMING SIGN DETAIL

T-12.03



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TOWN OF CHAPEL HILL

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STANDARD DETAIL

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SPEED HUMP PAVEMENT MARKINGS

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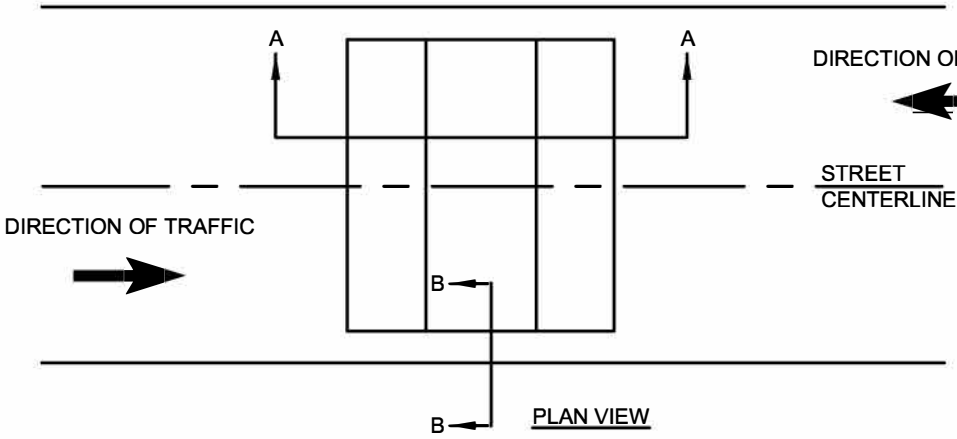
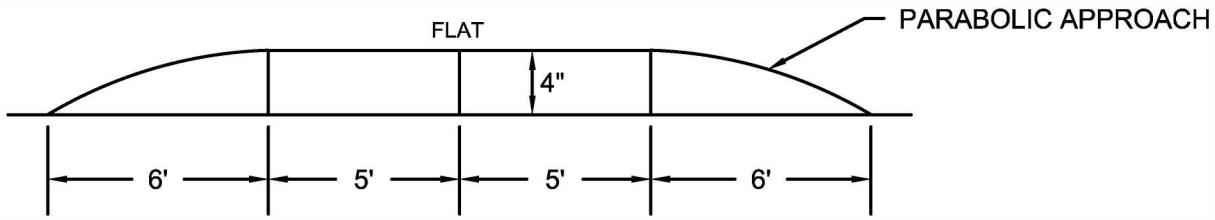
T-12.04



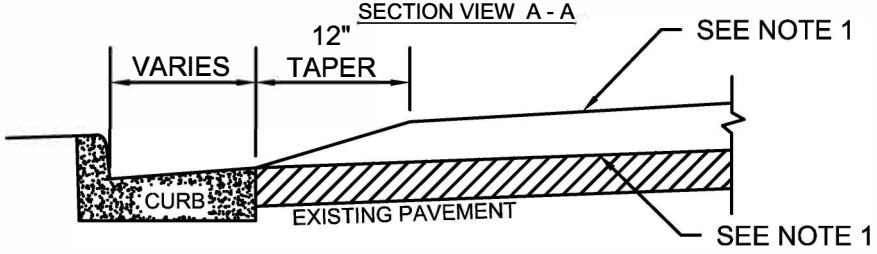
NOTES:

1. **USE TYPE 1-2 ASPHALTIC CONCRETE PER NCDOT STD. SPECIFICATIONS (SECT. 610 &645). THE ASPHALT PLANT MIX SHALL BE COMPACTED TO A DENSITY OF AT LEAST 94%.**

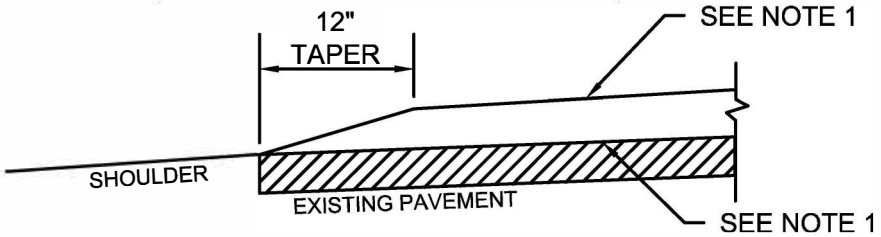
2. **TACK COAT PER NCDOT STD. SPECIFICATION (SECT. 605).**



SECTION VIEW A - A



SECTION VIEW B - B WITH CURB & GUTTER



SECTION VIEW B - B WITHOUT CURB & GUTTER

"NOT TO SCALE"

TOWN OF CHAPEL HILL

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STANDARD DETAIL

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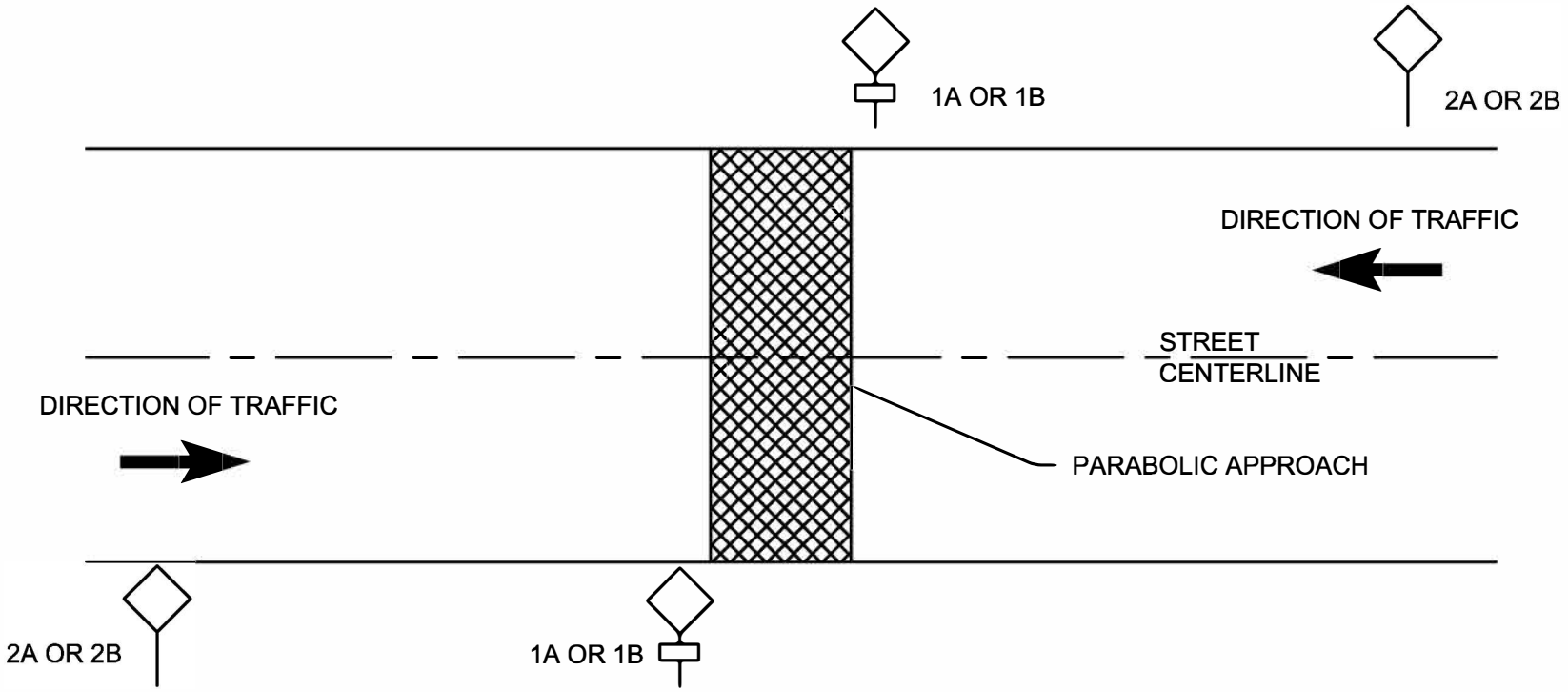
SPEED TABLE

T-12.05



NOTES:

1. **PLEASE SEE "TRAFFIC CALMING SIGNS" DETAIL FOR MORE INFORMATION.**

2. **THE EXACT LOCATION OF THE SIGNS WILL BE DETERMINED BY THE TOWN.**

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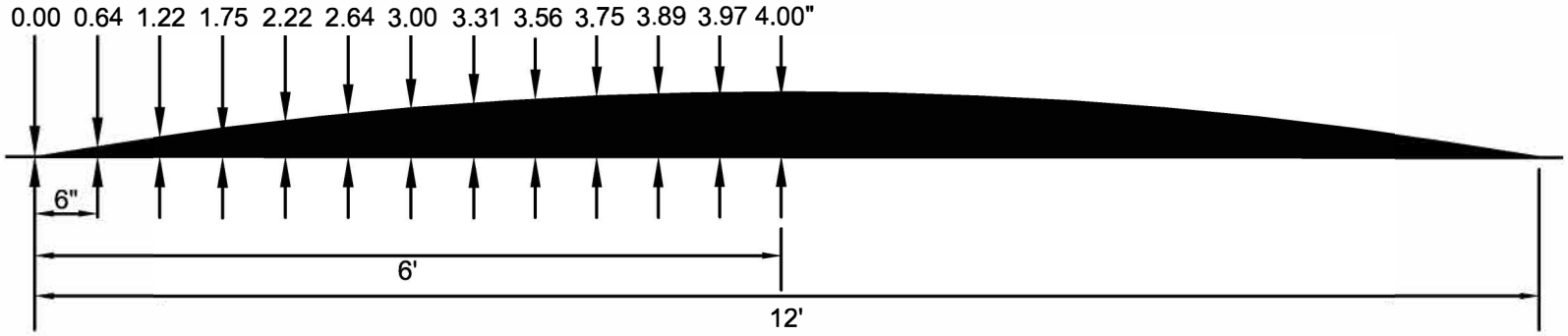
LOCATION OF TRAFFIC CALMING SIGNS

T-12.06



NOTES:

1. **USE TYPE 1-2 ASPHALTIC CONCRETE PER NCDOT STD. SPECIFICATIONS (SECT. 610 & 645). THE ASPHALT PLANT MIX SHALL BE COMPACTED TO A DENSITY OF AT LEAST 95%.**

2. **TACK COAT PER NCDOT STD. SPECIFICATION (SECT. 605).**

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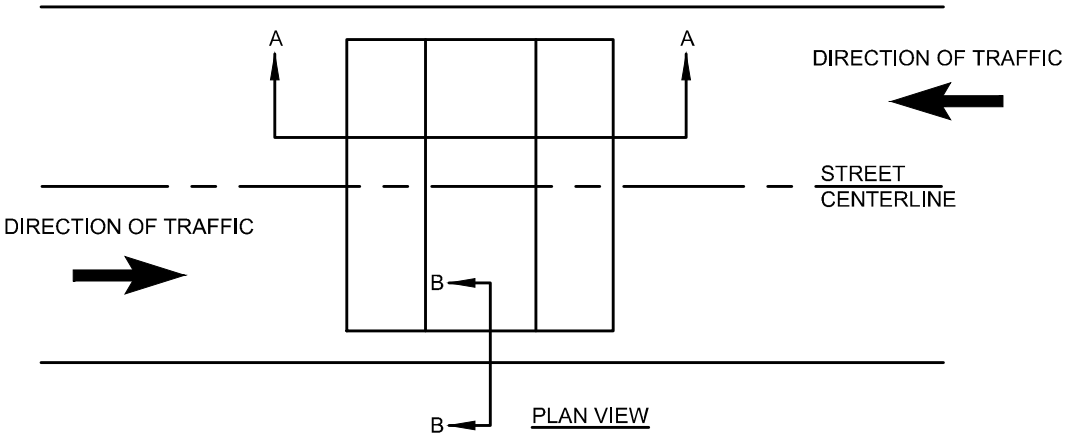
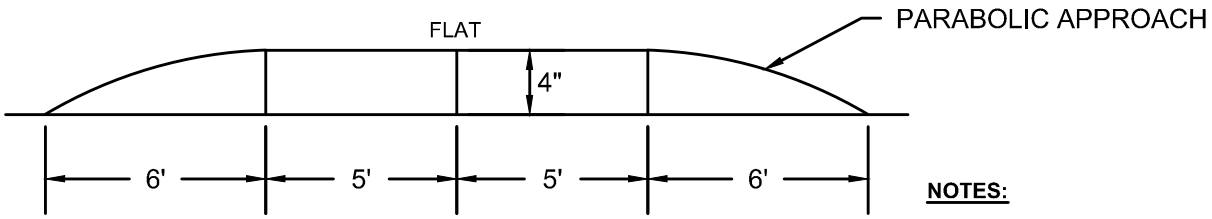
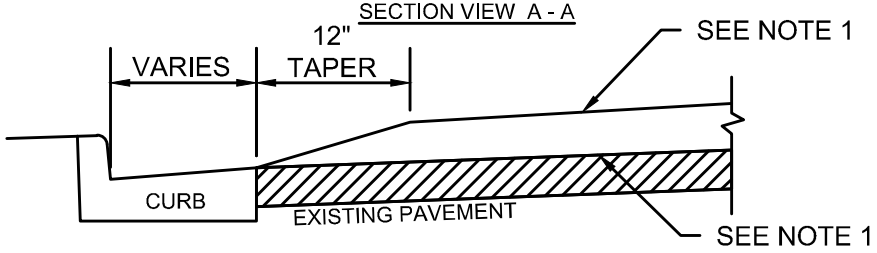
PARABOLIC SPEED HUMP

T-12.07

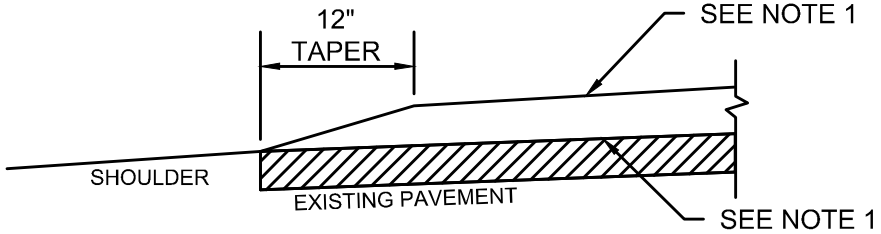




SECTION VIEW A - A



SECTION VIEW B - B WITH CURB & GUTTER



SECTION VIEW B - B WITHOUT CURB & GUTTER

NOTES:

1. **USE TYPE 1-2 ASPHALTIC CONCRETE PER NCDOT STD. SPECIFICATIONS (SECT. 610 &645). THE ASPHALT PLANT MIX SHALL BE COMPACTED TO A DENSITY OF AT LEAST 94%.**
2. **TACK COAT PER NCDOT STD. SPECIFICATION (SECT. 605).**

"NOT TO SCALE"

TOWN OF CHAPEL HILL

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FLAT TOP SPEED HUMP

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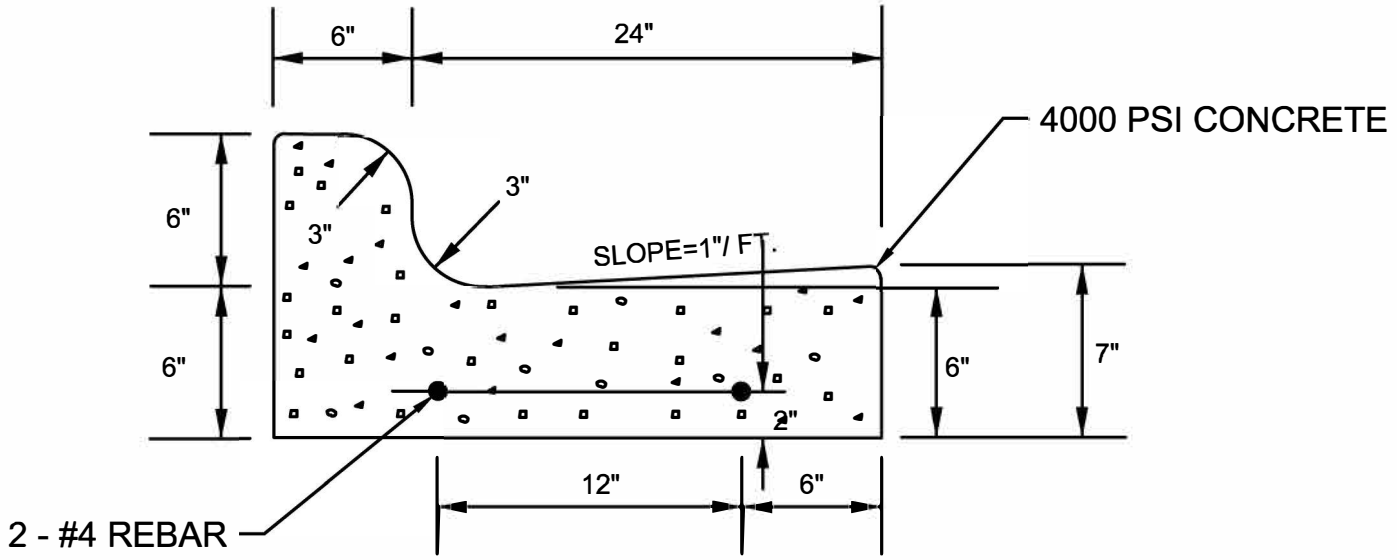
T-12.08



30" CURB & GUTTER

REINFORCED CURB AND GUTTER SECTION

"NOT TO SCALE"

TOWN OF CHAPEL HILL

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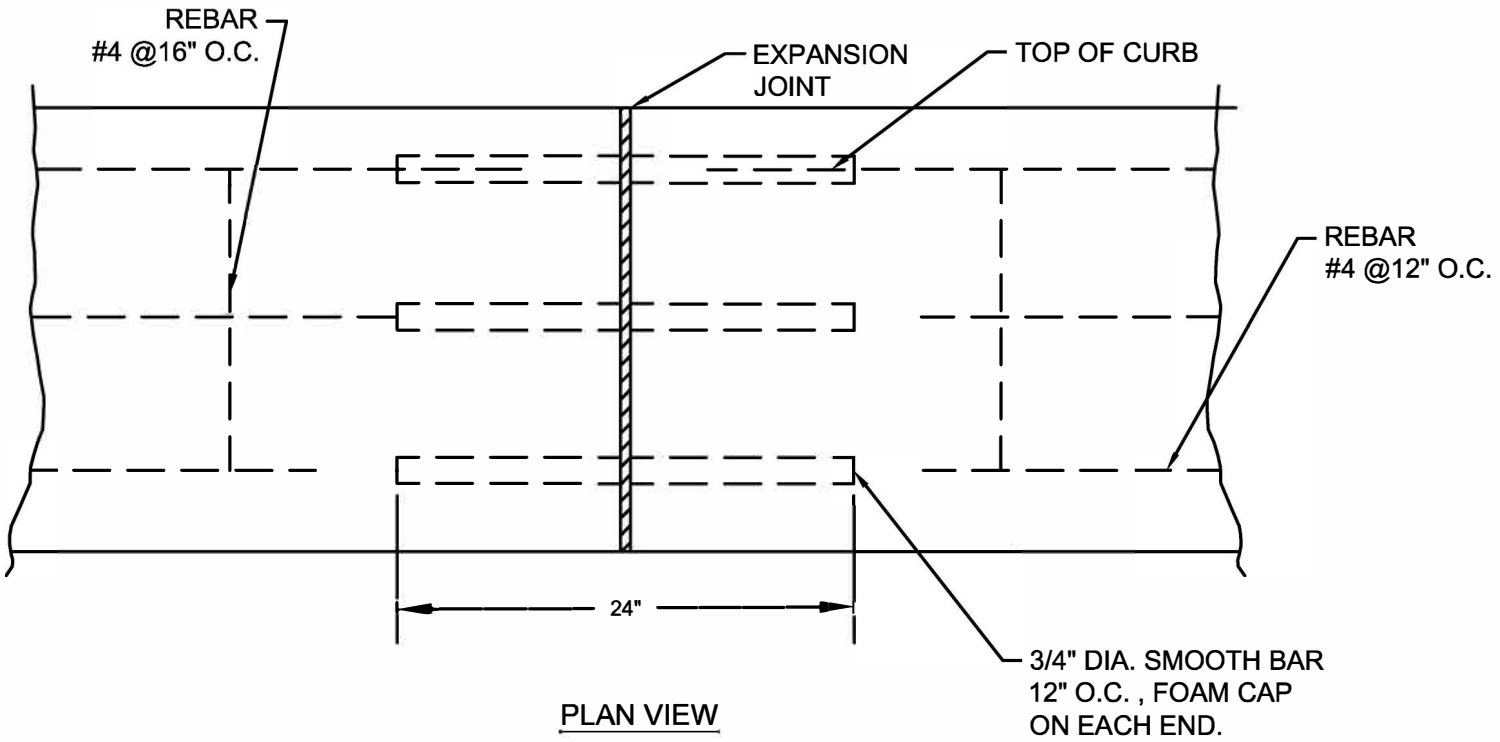
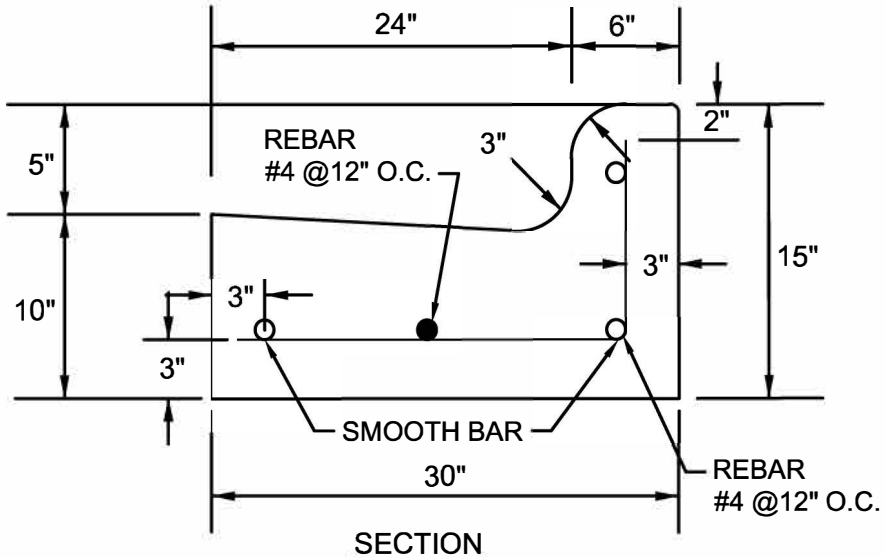
REINFORCED CURB AND GUTTER SECTION

T-13.01



PLAN VIEW



SECTION

NOTE:

ALL CONCRETE TO BE 5000 PSI, WITH FIBER.

"NOT TO SCALE"

TOWN OF CHAPEL HILL

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STANDARD DETAI L

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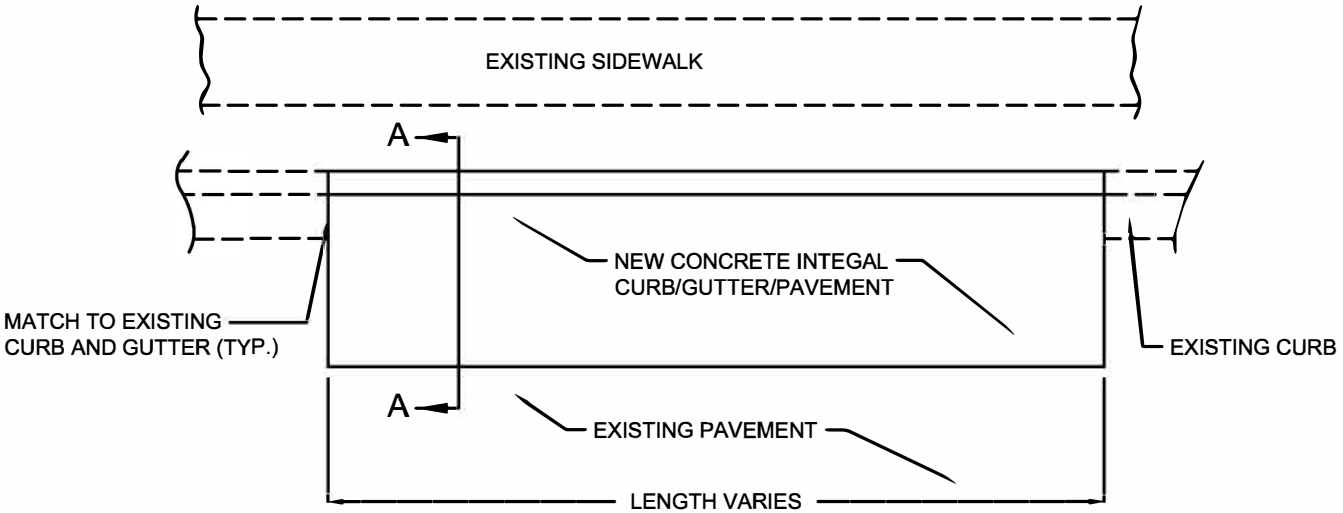
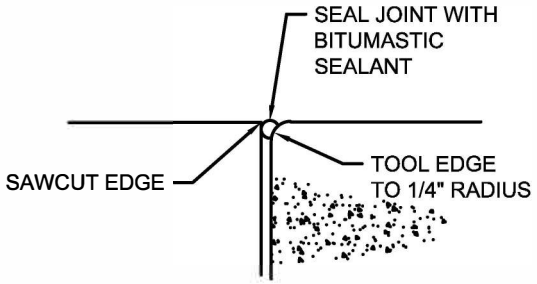
REINFORCED CURB AND GUTTER SECTION FOR BUS STOP

T-13.02

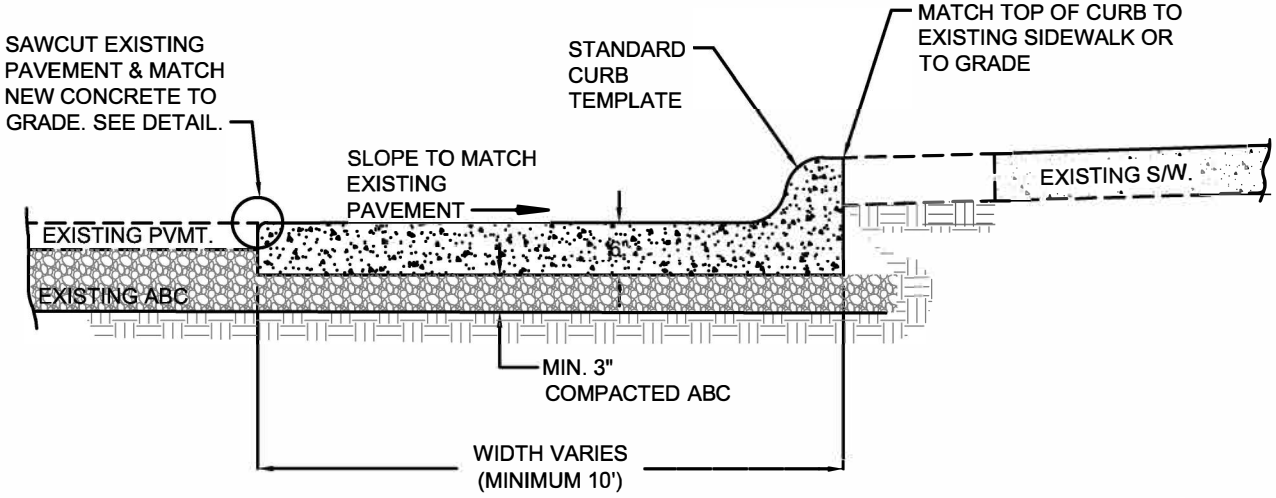


NOTES:

1. **CONCRETE - 400 PSI. 6% AIR ENTRAINMENT (± 1%, FIBER SECONDARY REINFORCEMENT, 4" SLUMP.**
2. **FINISHED - BROOM FINISH PERPENDICULAR TO ROAD CENTER LINE.**
3. **JOINTS - CONTRACTION (CRACK) JOINTS AT 10' SPACING, 2" DEEP (MIN.) EXPANSION JOINTS AT 40' SPACIN , FULL DEPTH. MATCH ADJACENT SIDEWALK JOINTS WHERE APPLICABLE.**
4. **CURING - USE WHITE PIGMENTED CURING COMPOUND IF DIRECTED SO BY TOWN INSPECTOR.**



INTEGRAL CONCRETE PAVEMENT
SECTION FOR BUS STOPS



SECTION A-A

"NOT TO SCALE"

TOWN OF CHAPEL HILL

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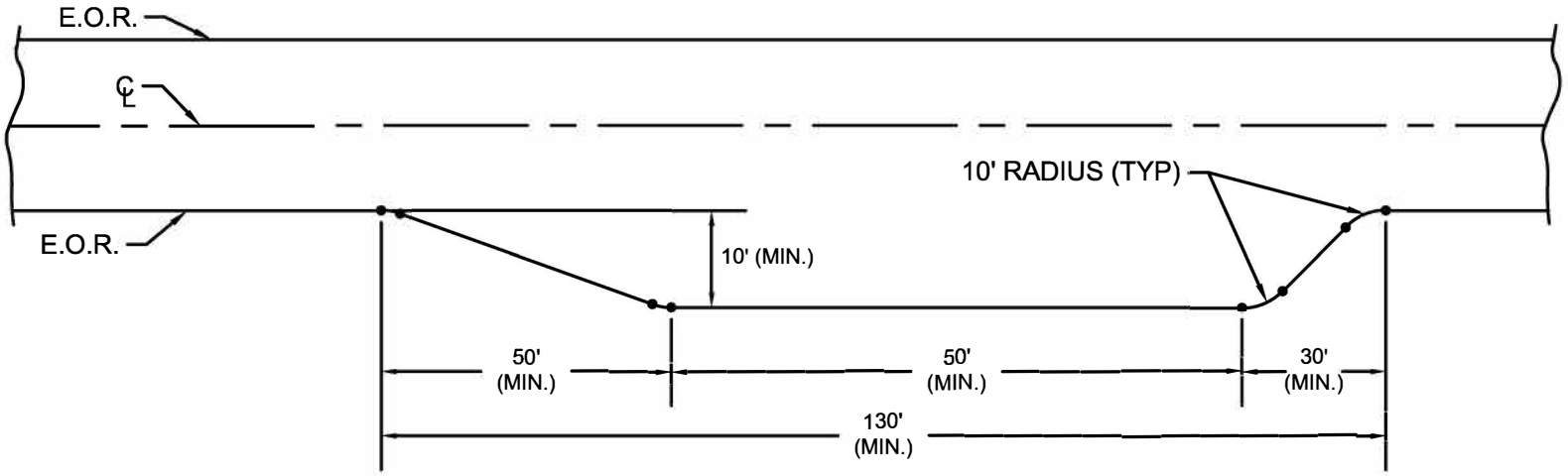
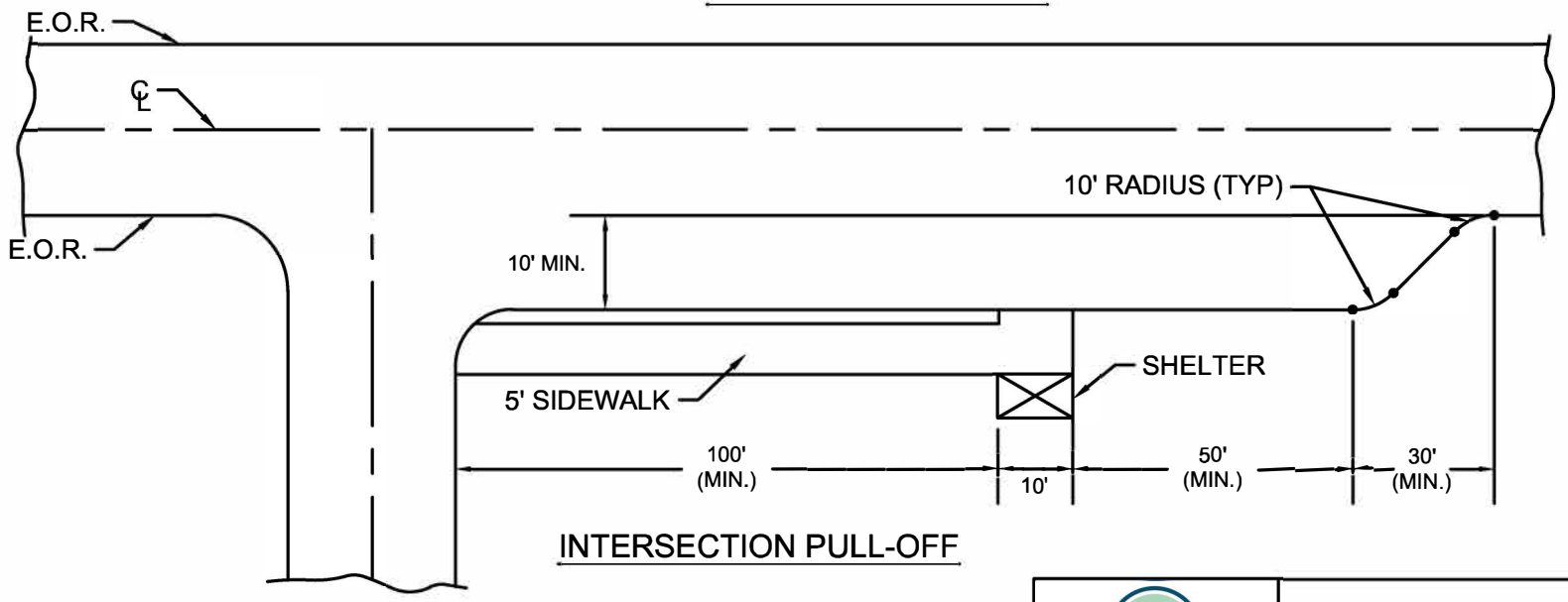
INTEGRAL CONCRETE PAVEMENT SECTION FOR BUS STOPS

DATE: 02/2017

T-13.03



MID-BLOCK PULL-OFF



INTERSECTION PULL-OFF

" N O T T O S C A L E "

TOWN OF CHAPEL HILL

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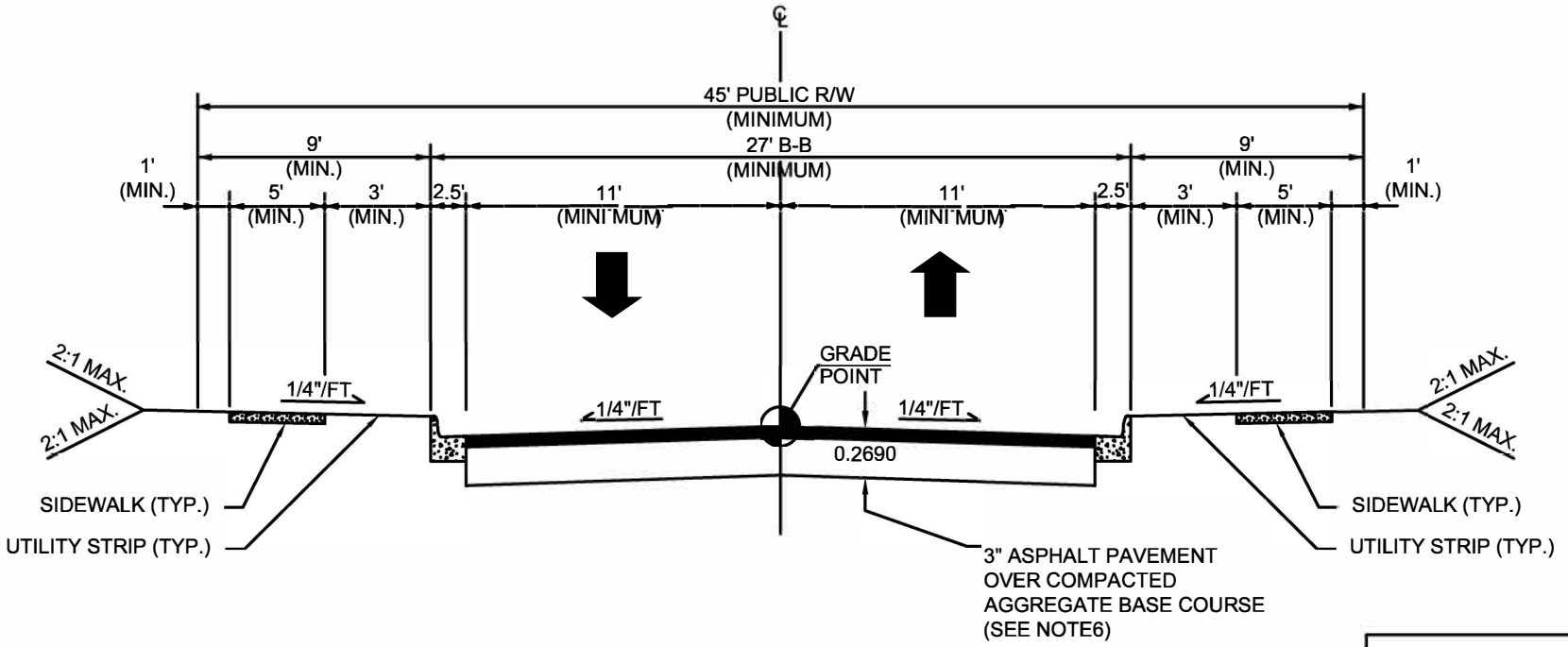
TOWN OF CHAPEL HILL
STANDARD DETAIL

REVISIONS
01/2026 - Logo only

BUS PULL-OFFS

T-13.04



PAVEMENT DESIGN
3" SF9.5A (SEE NOTE 6)

NOTES:

1. **UTILITY STRIP WIDTH MAY VARY DEPENDING ON APPROVED LANDSCAPING DESIGN.**

2. **ALTERNATIVE PAVEMENT DESIGNS MAY REQUIRED BASED UPON SITE - SPECIFIC SOIL AND DRAINAGE CONDITIONS.**

3. **ADDITIONAL RIGHT-OF-WAY MAY BE REQUIRED FOR UTILITY INSTALLATION.**

4. **ADDITIONAL TRAVEL LANE WIDTH MAY BE REQUIRED ON STREETS EXPECTED TO CONVEY HIGH TRAFFIC VOLUMES AND/OR TRUCK TRAFFIC.**

5. **ADD 9" (MINIMUM) OF ADDITIONAL PAVEMENT WIDTH IF TURN LANE IS REQUIRED.**

6. **AGGREGATE BASE COURSE THICKNESS SHALL BE 8" IN TYPE I AREA; 10" IN TYPE II AREA.**

" N O T T O S C A L E "

TOWN OF CHAPEL HILL

DATE: 02/2017

TOWN OF CHAPEL HILL
STANDARD DETAIL

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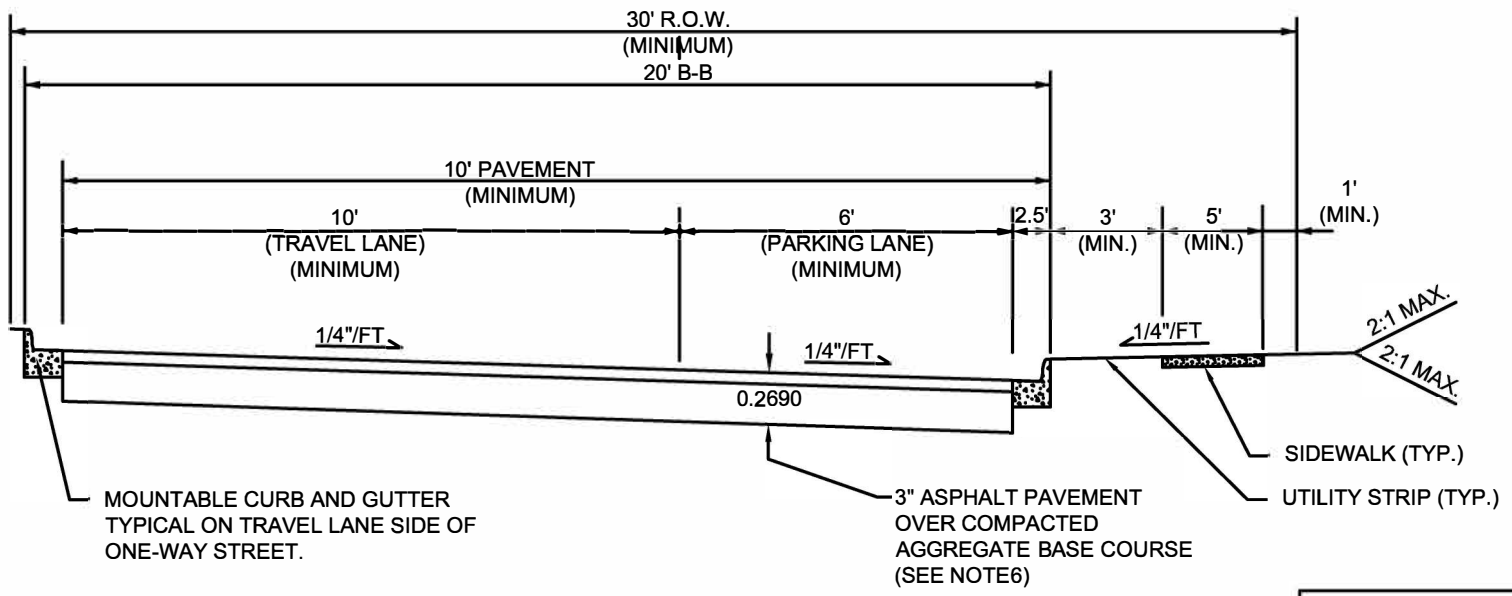
LOCAL STREET (WITH ON-STREET PARKING)

T-14.01



PAVEMENT DESIGN
3" SF9.5A (SEE NOTE 6)

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" N O T T O S C A L E "

TOWN OF CHAPEL HILL

DATE: 02/2017

TOWN OF CHAPEL HILL
STANDARD DETAI L

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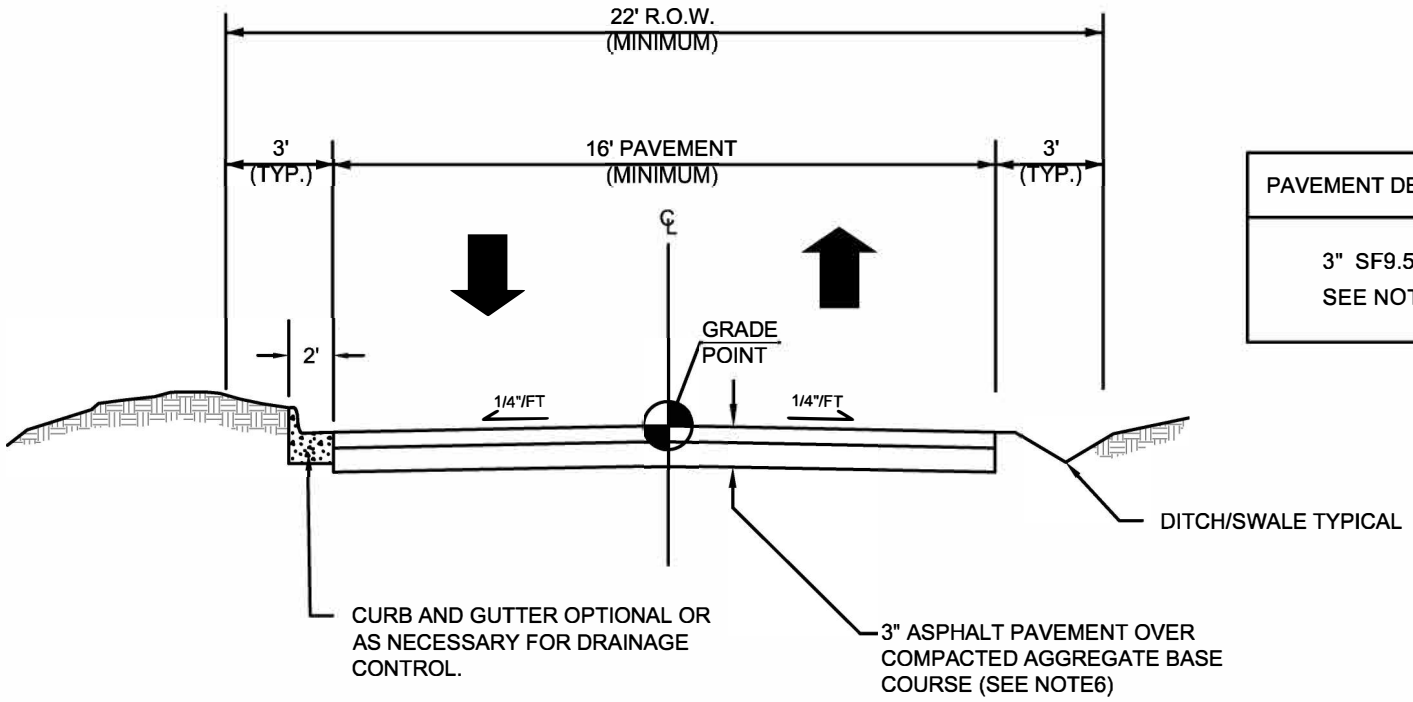
ONE-WAY STREET

T-14.02

RESIDENTIAL



PAVEMENT DESIGN
3" SF9.5A SEE NOTE 6

NOTES:

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" N O T T O S C A L E "

TOWN OF CHAPEL HILL

DATE: 02/2017

TOWN OF CHAPEL HILL
STANDARD DETAI L

REVISI ONS
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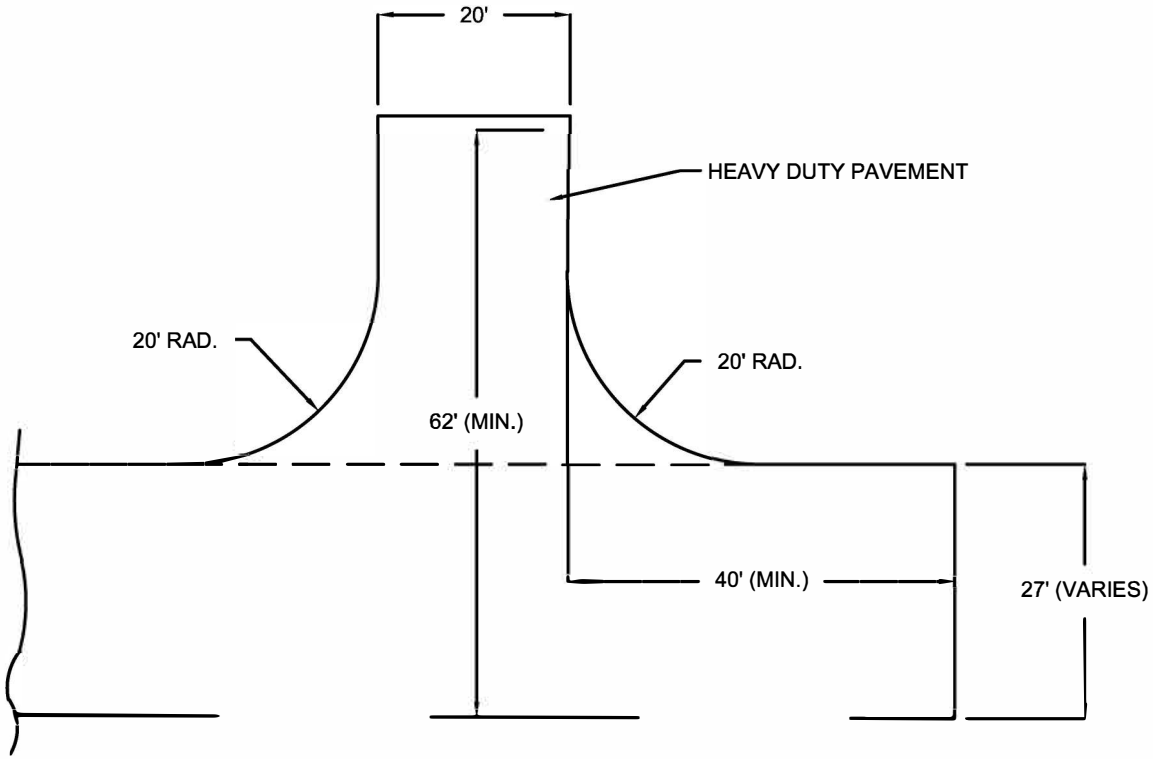
PUBLIC ALLEY

T-14.03



NOTES:

THIS TURNAROUND DESIGN FOR TOWN OF CHAPEL HILL LARGEST TRASH COLLECTION TRUC WHICH HAS A 20' WHEELBASE AND A 30' OVERALL LENGTH.

" N O T T O S C A L E "

TOWN OF CHAPEL HILL

DATE: 02/2017

TOWN OF CHAPEL HILL
STANDARD DETAI L

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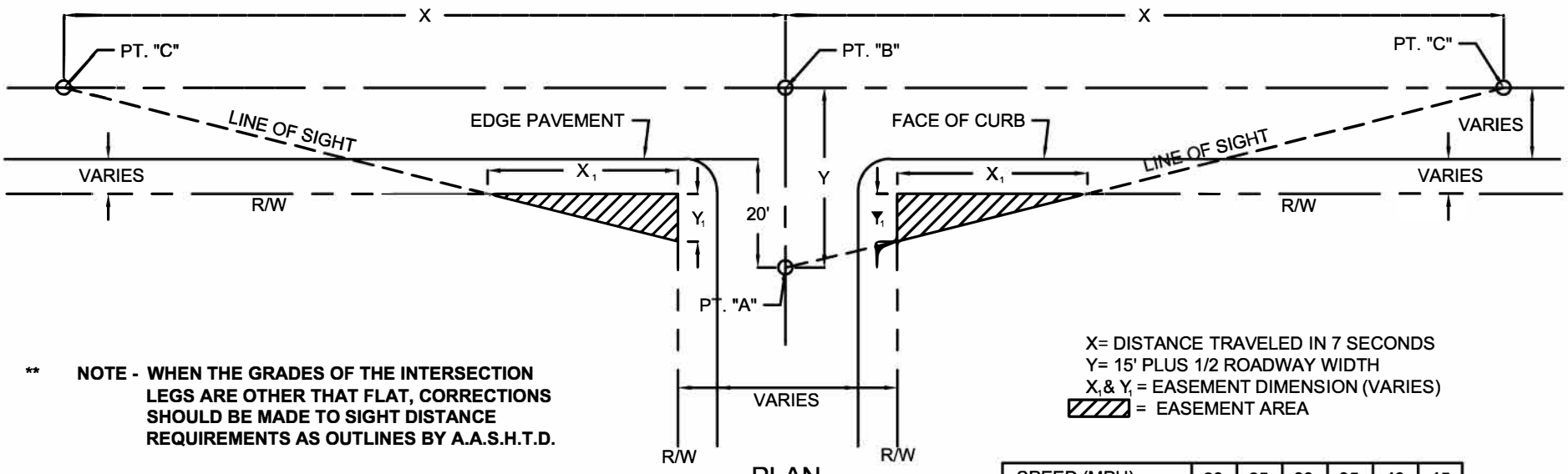
"T"
TURNAROUND

T-14.04

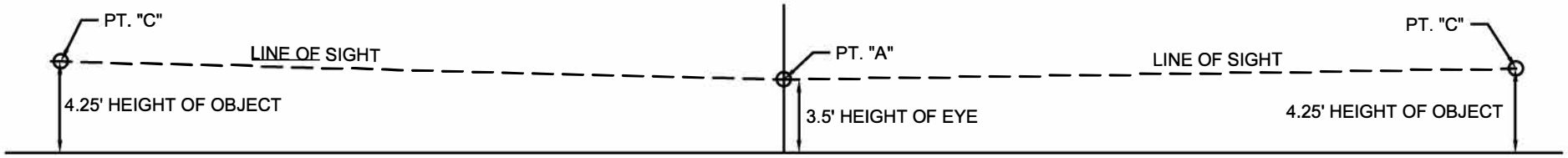


PLAN

** NOTE - WHEN THE GRADES OF THE INTERSECTION LEGS ARE OTHER THAT FLAT, CORRECTIONS SHOULD BE MADE TO SIGHT DISTANCE REQUIREMENTS AS OUTLINES BY A.A.S.H.T.D.

X= DISTANCE TRAVELED IN 7 SECONDS
Y= 15' PLUS 1/2 ROADWAY WIDTH
X_1 & Y_1 = EASEMENT DIMENSION (VARIES)
= EASEMENT AREA

SPEED (MPH)	20	25	30	35	40	45
X DISTANCE (FT)	206	257	308	360	411	462



PROFILE

"NOT TO SCALE"

TOWN OF CHAPEL HILL

TOWN OF CHAPEL HILL
STANDARD DETAIL

REVISIONS
01/2026 - Logo only

"TYPICAL SIGHT DISTANCE EASEMENT FOR AT-GRADE INTERSECTION OF TWO ROADS"

DATE: 02/2017

T-15.00

LENGTH OF TAPER

WIDTH(FT)	1		2		3		4		5		6	
SPEED (MPH)	LENGTH OF TAPER (FT)											
	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.
20	10	15	15	20	20	30	30	45	35	55	40	60
25	15	25	25	40	35	55	45	70	55	85	65	100
30	15	25	30	45	45	70	60	90	70	115	90	135
35	25	40	45	70	65	100	85	130	105	160	125	190
40	30	45	55	85	80	120	110	165	135	205	160	240
45	45	70	90	135	135	205	180	270	225	340	270	405
50	50	80	100	150	150	225	200	300	250	375	300	450
55	55	85	110	165	165	250	220	330	275	415	330	415

WIDTH(FT)	7		8		9		10		11		12	
SPEED (MPH)	LENGTH OF TAPER (FT)											
	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.
20	50	75	55	85	60	90	70	105	75	115	80	120
25	75	115	85	130	95	145	105	160	115	175	125	190
30	105	160	120	180	135	205	150	225	165	250	180	270
35	145	220	165	250	185	280	205	310	205	340	245	470
40	190	285	215	325	240	360	270	405	295	445	300	480
45	315	475	360	540	405	610	450	675	495	745	540	810
50	350	525	400	600	450	675	500	750	550	825	600	990
55	385	580	440	660	495	745	550	825	605	910	660	990

[2] TAPPER FORMULA: $L = WS$ FOR SPEEDS OF 45 OR MORE.
$L = \frac{WS^2}{60}$ FOR SPEEDS OF 40 OR LESS.

WHERE: L = MINIMUM LENGTH OF TAPER.
S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK OR 55 PERCENTILE SPEED.
W = WIDTH OF OFFSET.

"NOT TO SCALE"

TOWN OF CHAPEL HILL

TOWN OF CHAPEL HILL
STANDARD DETAIL

REVISIONS
01/2026 - Logo only

LENGTH OF TRANSITION

DATE: 02/2017

T-16.00